

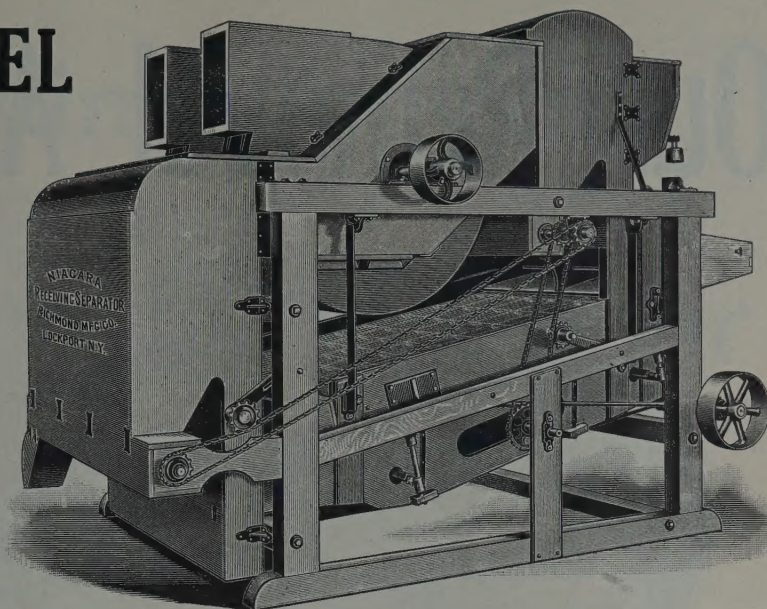
## McDANIEL GRAIN DRIER

Will remove from grain any percentage of moisture desired. Hot or cold air or both can be used.

Built for any capacity.

Guaranteed satisfaction.

Hundreds in daily use.



## NIAGARA RECEIVING SEPARATOR

Especially adapted for cleaning all kinds of grain. Steel sieves. Deep ring oiling boxes. Cleaners that keep the sieves clean at all times.

Built of steel, wood, or wood covered with steel, in capacities from 30 to 4000 bushels per hour.

Write Us

**RICHMOND MANUFACTURING CO.,** Established 1863 **Lockport, N. Y.**

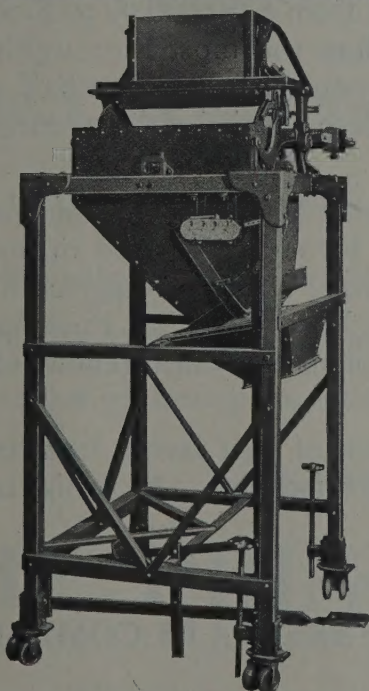
## NOT A BILL OF EXPENSE BUT A SOURCE OF REVENUE

Enables Shippers to Collect Claims

Requires No Repairs

Occupies Small Space

Most Economical to Install



PORTABLE BAGGER

Write for Catalog.

No Bother to Operate

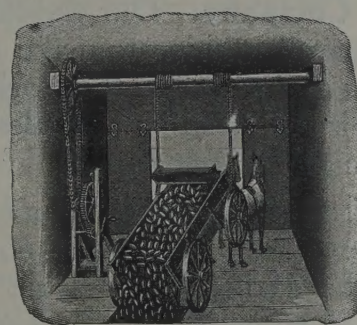
Never Gets Out of Order

Will Not Rust or Wear Out

60 Days' Trial

## The Sidney Line

Corn Shellers  
Cleaners  
Wagon Dumps  
Green Feeders  
Manlifts  
Heads and Boots  
Steel Spouts



Smith's Wood Roller Wagon Dump

Everything in Power Transmission

### Everything to Complete an Elevator Equipment

Groveport, Ohio, Jan. 3, 1910

Gentlemen:—In the fall of 1907 we bought of your company the following machinery: 7 M. O. Chain Drag Feeders, 6 Wood Roller Overhead Wagon Dumps and 1 No. 2 L. H. Over Discharge Sidney Fan Corn Sheller. We have used this machinery for two seasons and it has given entire satisfaction.

Before installing this machinery, we used the drag belt and the old fashion rail dump, and they were both a source of annoyance and were frequently giving us trouble. We have used several different makes of corn shellers, but we have never used one that has given us as little trouble as the Sidney.

Very truly yours,

BAUM & HERR

MANUFACTURED BY

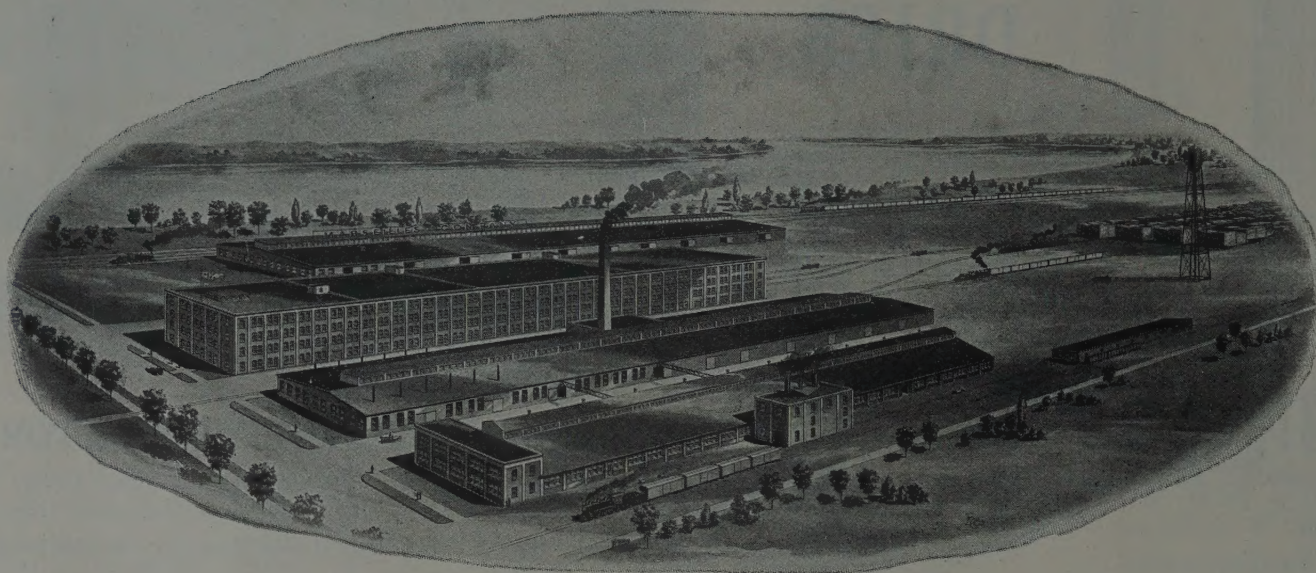
**The Philip Smith Mfg. Co., Sidney, O.**

A Stock of Machinery and Supplies at Enterprise, Kans.

**National Automatic Scale Co.**  
Bloomington, Illinois



# Our Removal Announcement



## To the Trade

We take pleasure in announcing that our new plant at **East Moline, Ill.**, shown above, is now in operation, and that the General Offices of this company have been removed from **Marseilles, Ill.**, to that city, to which all communications for us should be addressed. This has been accomplished with little or no inconvenience to our customers as we have a large stock of manufactured goods on hand with which to fill orders.

The name of our company has been changed from **Marseilles Manufacturing Company**, to **Marseilles Company**. Our capitalization has been increased from \$250,000.00 to \$750,000.00. We have spared nothing to make our new plant at **East Moline** the most thoroughly perfect and modern of its kind in the world. It represents an investment of more than half a million dollars and is equipped in every detail with every possible modern appliance for accurate, rapid and economical manufacturing.

We will continue as heretofore to manufacture the celebrated **Marseilles** line of Warehouse Corn Shellers, both with and without cleaning apparatus and for either shucked or unshucked corn, and the **Marseilles** Portable Elevators and Wagon Dumps; and in the agricultural line, in addition to Hand and Power Corn Shellers, Horse Powers, Feed Grinders, Pumping Jacks, etc., heretofore made by us, we will manufacture in our new plant the world-renowned line of "Success" Manure Spreaders for trade of the Western States.

We take this occasion to express our sincere appreciation of past favors from our large line of patrons and to solicit a continuance of same in our new location. A cordial invitation is extended to all to visit and inspect our new plant.

Yours very truly,

MARSEILLES COMPANY.

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NEW ADDRESS

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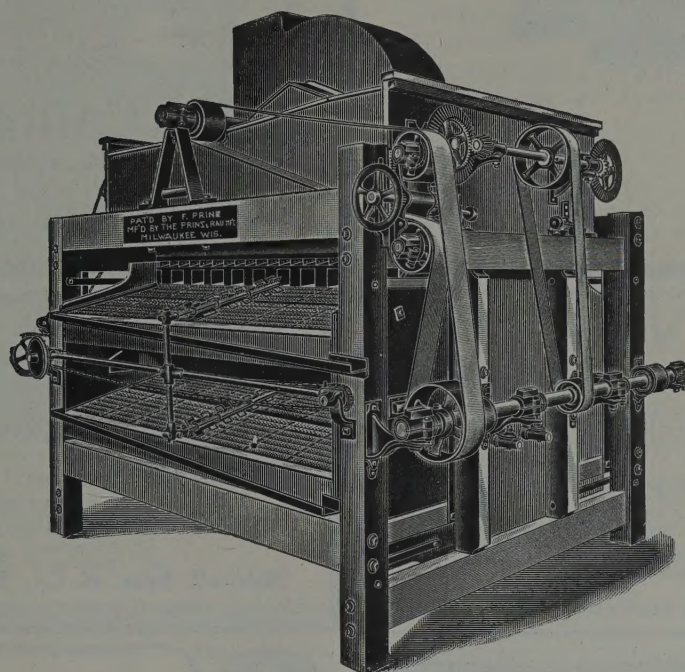
**MARSEILLES COMPANY - East Moline, Illinois**



# Two Machines In One

THAT IS WHAT YOU GET IN A

## Prinz Automatic Separator



TWO GRADES OF GRAIN CAN BE TREATED  
INDEPENDENTLY AND AT THE SAME TIME

**Perfect Cleaning===Durability===Ease of Regulation**

The screens are of sheet steel, with seed screen at head of each sieve—built to stand hard usage.

Automatic gate, spreading grain entire width of each sieve—no lost surface.

Patented automatic traveling sieve cleaner—the first and best of its kind.

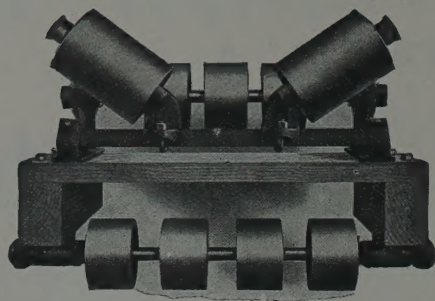
Compact design, occupying minimum space per bushel capacity.

*Write for further information*

**THE PRINZ & RAU MFG. CO.**  
**MILWAUKEE, WIS.**

Represented by A. H. Kirk, 1-A Chamber of Commerce, Minneapolis, Minn.; F. E. Lehman, 124 Board of Trade, Kansas City, Mo.;  
C. H. Near, 757 Ellicott Square, Buffalo, N. Y.; M. D. Beardslee, 106 Piquette Ave., Detroit, Mich.  
European Representatives, Ingenieur Bureau "Zwijndrecht," Prins Mauritsplein, La, The Hague, Holland.





## Improved Belt Conveyor

Carries all kinds of grain and mill products in package or bulk. Gradual, uniform curve of belt secured without complicated parts. Bearings thoroughly lubricated and have adjustment for taking up wear. Tripper substantial and reliable. Entire system economical and satisfactory—nothing to get out of order.

We manufacture a complete line of Elevating, Conveying and Power-Transmitting Machinery. Headquarters for supplies. Send for Catalog 34.

### H. W. Caldwell & Son Co.

Chicago, Western Ave., 17th-18th Sts.

NEW YORK, Fulton Bldg., Hudson Terminal, 50 Church Street

### Will You Need Elevator Machinery or Supplies This Year?

Prices are advancing—order early, or send for estimates. Best goods—best prices.

**GRAIN DEALERS' SUPPLY COMPANY**  
305 South Third Street Minneapolis, Minn.

General Agents for Avery Automatic Scales for Iowa, Minnesota and the Dakotas. They are accurate, durable, simple.

## Elwood's Grain Tables

Show the value of any number of bushels or pounds of **WHEAT, RYE, OATS, CORN or BARLEY** at any given price from 10 cents to \$2.00 per bushel. One of the most useful books ever offered to millers. Indorsed by prominent millers and grain dealers. Bound in cloth, 200 pages. Mailed on receipt of price

\$1.25

Mitchell Bros. & Co., 315 Dearborn St., Chicago, Ill.



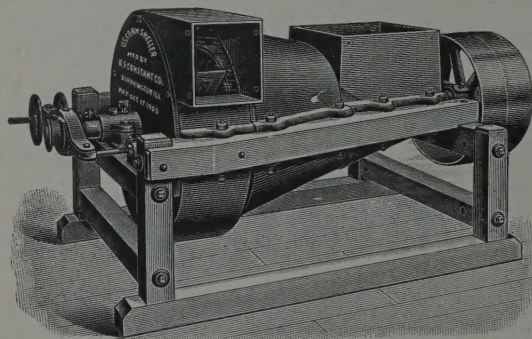
## The CONSTANT MAN LIFT

IS ALWAYS READY TO SERVE YOU

It is a pleasure to go to the cupola as the Ball Bearings make it the easiest operated Manlift on the market. The Safety Catch makes it safe. It is quickly adjusted for different weight men and, best of all, the Fire Insurance Company write us they will give users a credit on rates. State distance between floors and receive our Net Price.

## The U. S. FAN DISCHARGE CORN SHELLER

has exclusive features which makes it the best of its kind.



For instance the **QUICK REPAIR** advantage makes it worth more money to you on a busy day than you realize. Only 30 minutes, or less, to renew a shell or other casting. Lock wheel Adjustment on all our Shellers. Takes up less space, is positive and can be operated while Sheller is full of corn and running.

NO MORE SUPERFLUOUS CRACKED CORN.

Send us your specifications for lump price.

**B. S. CONSTANT CO.,** Bloomington, Ill.

Traveling Representative: N. A. GRABILL, Anderson, Ind.



## "Eureka" Dryers



IN EVERY CASE EXCEED  
THE CAPACITY GUARANTEED

Consequently a user can handle corn containing any amount of moisture, without reducing the capacity.

READ WHAT A USER SAYS, AFTER ONE SEASON'S WORK:

Piqua, Ohio, February 26th, 1910.

The S. Howes Company,  
Silver Creek, N. Y.

Gentlemen:—We used the Corn Dryer on about thirty cars last Fall and found that you had more than exceeded your guarantee. We have no figures to give you as we had no Moisture Tester, but we dried 160 bushels of Green Corn per hour, with 30 pounds of steam, and put it in condition for carrying four weeks to New England.

Our broker said we had the best corn that had arrived in that section. We would not be without the Dryer at any cost.

Very truly,  
C. N. ADLARD.

"Eureka" Dryers are guaranteed to give Perfect Satisfaction  
*Investigate Them*

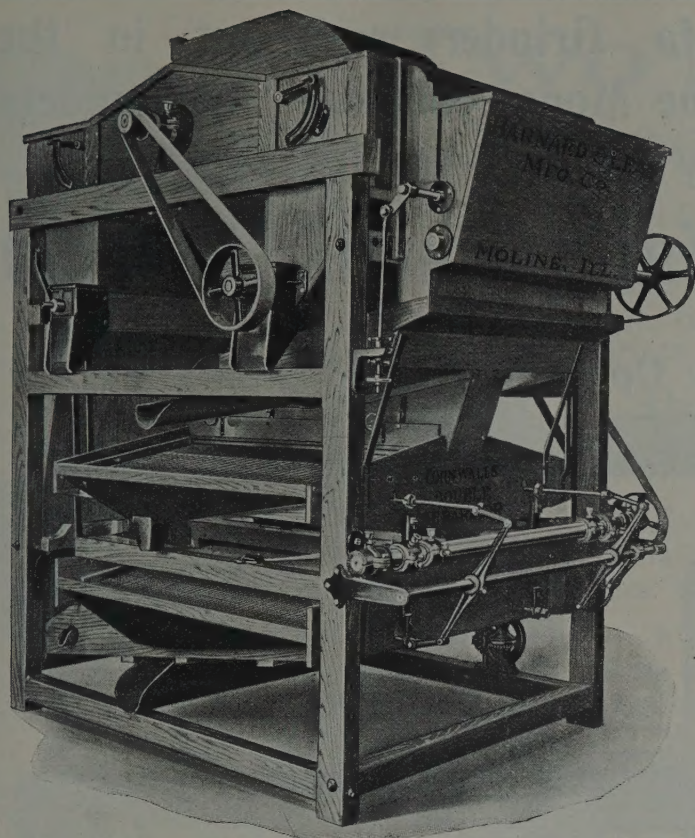
**THE S. HOWES COMPANY**

"Eureka Works," Silver Creek, N. Y.

ESTABLISHED 1856







## The Latest in Separators

Our Double Side-Shake Separator has all the latest improvements. The bearings are all chain oiling, are dust proof, have large oil wells, are fitted with brass grease cups, and are of extra length.

The eccentric boxes are self-oiling and never heat when properly oiled.

It has two kinds of sieve motion—sieve with motion in line with the grain, and sieves with side shake.

All sieves are kept perfectly clean with our sieve cleaning device which works underneath the sieves.

The regulation of the feed and adjustment of every part is of the latest pattern and superior to any other machine of its class.

These are only a few of its features, the rest are fully described in our latest circular.

We also make other Separators of all kinds, Oat Clippers and Scourers, Feed Mills of all kinds, etc. In short, we furnish complete machinery equipments for Grain Elevators, Malt Houses, Cereal, Corn, Feed, Flour and Cement Mills.

SEND FOR LATEST CIRCULAR

**BARNARD & LEAS MFG. CO.**

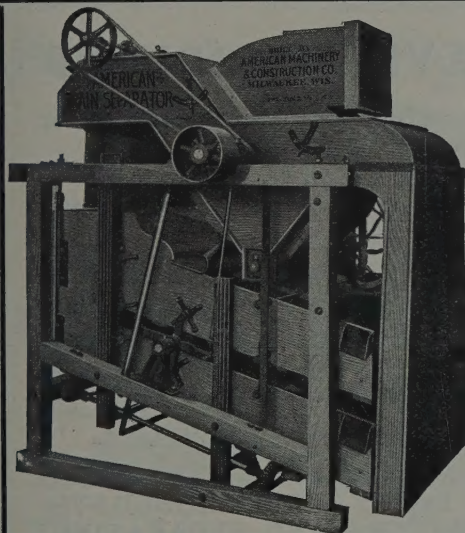
Mill Builders and Mill Furnishers

MOLINE, ILL.

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M. M. SNIDER, 1533 East Walnut Street, Des Moines, Iowa  
W. S. BRASHEAR, 421 East Pine Street, Springfield, Mo.  
WM. EBERT, 2028 Midland Avenue, Louisville, Ky.  
C. B. DONALDSON, 568 Oak Street, Columbus, Ohio

H. J. CREAGOR, P. O. Box 1595, Salt Lake, Utah  
GEO. J. NOTH, Tel. Harrison 5597, 402 Monadnock Block, Chicago  
U. C. DARBY, Williamsport Md.  
WILLFORD MFG. CO., Minneapolis, Minn.



Perfect Pneumatic Cleaning, combined with thorough sieve separations, is possible only with the

## American Grain Separator

¶ Not only does this machine clean more thoroughly, at a much greater capacity than any other, but it also saves 50% in power. It is entirely automatic in operation, requires much less space, runs absolutely quiet, and therefore does not have to be braced to keep it in place.

¶ It is the only grain cleaner which will extract positively all refuse of a lighter nature than the grain to be cleaned. It pneumatically extracts impurities that it is impossible to extract by any other method or device.

Write now for full information, which will be of great value to you.

**American Machinery & Construction Co.**

MILWAUKEE, WISCONSIN

Want ads. in this paper bring results  
Rates on application.



**YOU'LL BE HAPPY**

WITH A

**"NEW ERA"**

**Passenger Elevator**

It is the **EASIEST RUNNING**  
**SAFEST**  
**BEST**

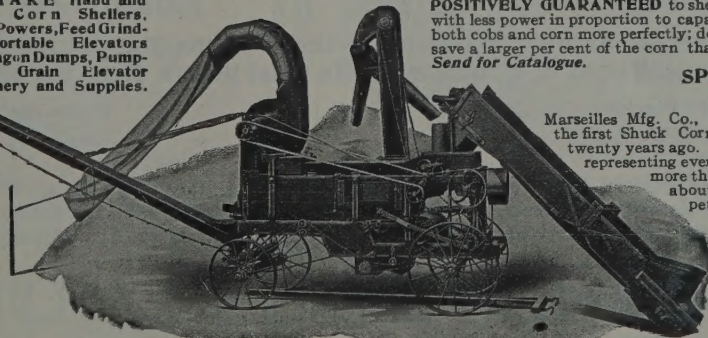
It has many exclusive features.  
Write for  
information and prices.

**Sidney Elevator Mfg. Co.**  
SIDNEY, OHIO.

## NEW MARSEILLES DUSTLESS CYLINDER CORN SHELLERS

WE MAKE Hand and Power Corn Shellers, Horse Powers, Feed Grinders, Portable Elevators and Wagon Dumps, Pump-Jacks, Grain Elevator Machinery and Supplies.

Made in Several Sizes, Both Stationary and Portable Styles.



**POSITIVELY GUARANTEED** to shell either shucked or unshucked corn faster, with less power in proportion to capacity; take the corn off the cobs cleaner; clean both cobs and corn more perfectly; do less crushing or grinding of corn or cobs and save a larger per cent of the corn than any other cylinder sheller on the market. Send for Catalogue.

**SPEAKS FOR ITSELF**

Gainesville, Texas, May 12, 1908.  
Marseilles Mfg. Co., Marseilles, Ill.—Gentlemen:—We purchased the first Shuck Corn Sheller you ever made, some eighteen or twenty years ago. Since then we have bought 12 or 13 of them, representing every improvement, and expect to buy several more this season. We have bought one or more of about every other make and think we are competent judges of such machinery. Your Shellers husk and shell the corn off the cob more thoroughly; save it more completely; clean both the shelled corn and the cobs more perfectly; require less power in proportion to capacity, are more durably constructed and cost less, loss of time and cost of repairs considered, than any sheller we have ever used. We have thrown out every other kind of Corn Sheller we ever bought and have replaced them with yours. KEEL & SON. By J. Z. Keel.

MARSEILLES COMPANY, East Moline, Ill.

Branch Houses and General Agencies at Principal Distributing Cities.

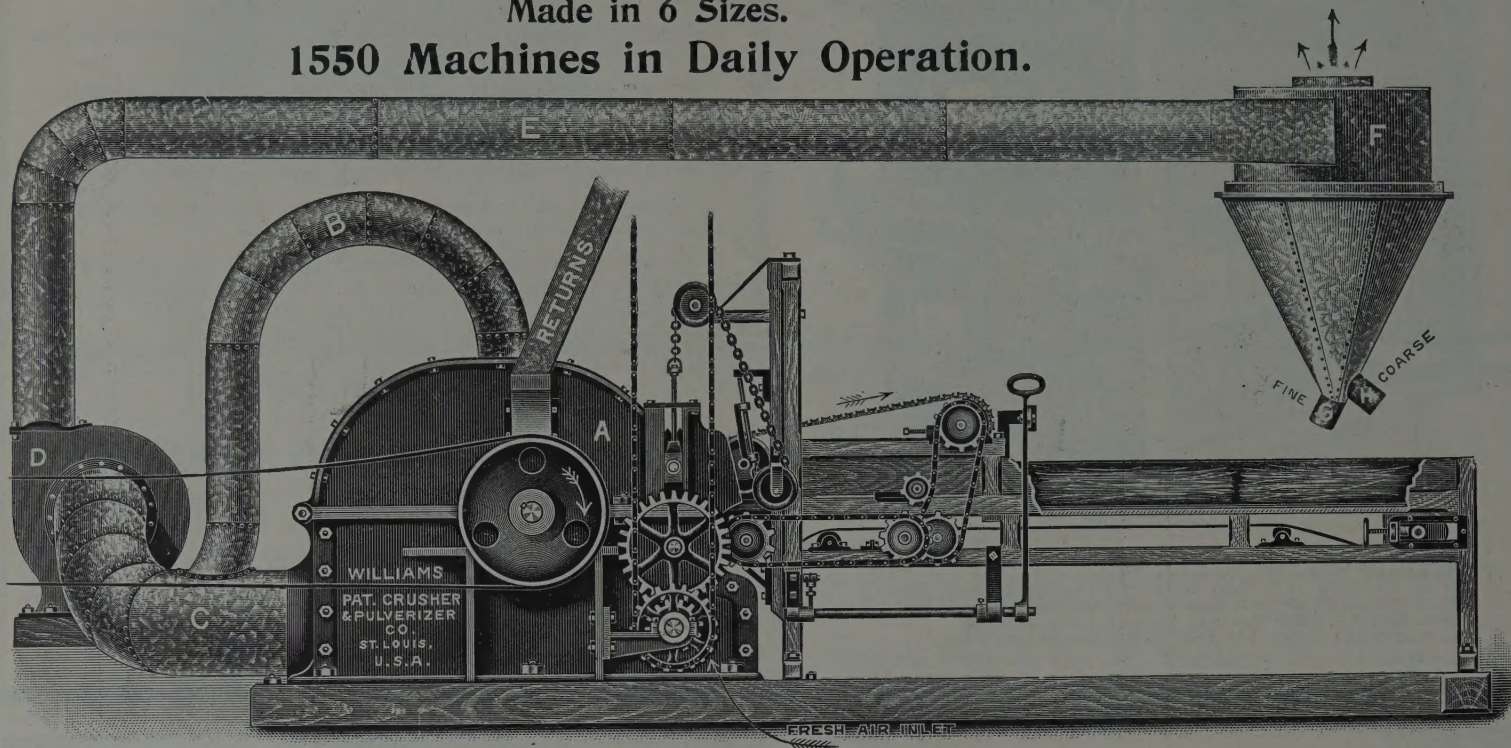


**SCRAP that troublesome Alfalfa Grinder and put in the WILLIAMS SYSTEM—Make Some Money for your Stockholders—GET RESULTS. You can only get such results from**

## **The Williams Patent Alfalfa Grinding System**

Made in 6 Sizes.

1550 Machines in Daily Operation.



### **THE ONLY VERSATILE FEED GRINDER EVER PRODUCED**

They will reduce EAR CORN with the HUSK on.  
They will reduce ALFALFA HAY from the BALE or from the STACKS.

They will reduce ALFALFA HAY and EAR CORN together.

They will reduce ALFALFA HAY and SHELLED CORN together.

They will reduce ALFALFA HAY and OATS together.

They will reduce ALFALFA HAY and FODDER OF ALL KINDS, with the CORN on.

They will reduce ALFALFA HAY and PEA VINES.

They will reduce EAR CORN ALONE or SHELLED CORN ALONE.

They will reduce OATS ALONE.

They will reduce ALFALFA HAY and two other kinds of CEREALS at the same time, as each machine has three separate feeding places.

We have a corps of competent milling engineers in the field making estimates and taking contracts for the installation of complete alfalfa meal plants, from the stump up.

For Further Information

Write for BULLETIN No. 7

They will reduce ANY FORAGE material or CEREAL, together or separately.

They will reduce GREEN CORN from the field.

They will reduce CLOVER HAY, TIMOTHY or ANY KIND OF STRAW.

They are CUTTERS when desired, GRINDERS when desired and SHREDDERS when desired.

They are COB CRUSHERS when desired.

They will reduce COARSE OR FINE by changing cages.

They will reduce OAT HULLS, RICE HULLS, FLAX SHIVES or any other FOOD MATERIAL.

They produce two grades of goods AT THE SAME TIME, coarse or fine, BY OUR COMBINED SYSTEM OF COLLECTING AND SEPARATING.

They WILL GIVE DOUBLE THE CAPACITY FOR THE POWER EXPENDED AND COST FOR REPAIRS OF ANY KNOWN GRINDER ON EARTH.

Write for Catalog of the Noxon

Automatic Hay, Meal and All Around Feeder

Southwestern Representative: A. G. Olds, Care Manhattan Hotel, Wichita, Kan.

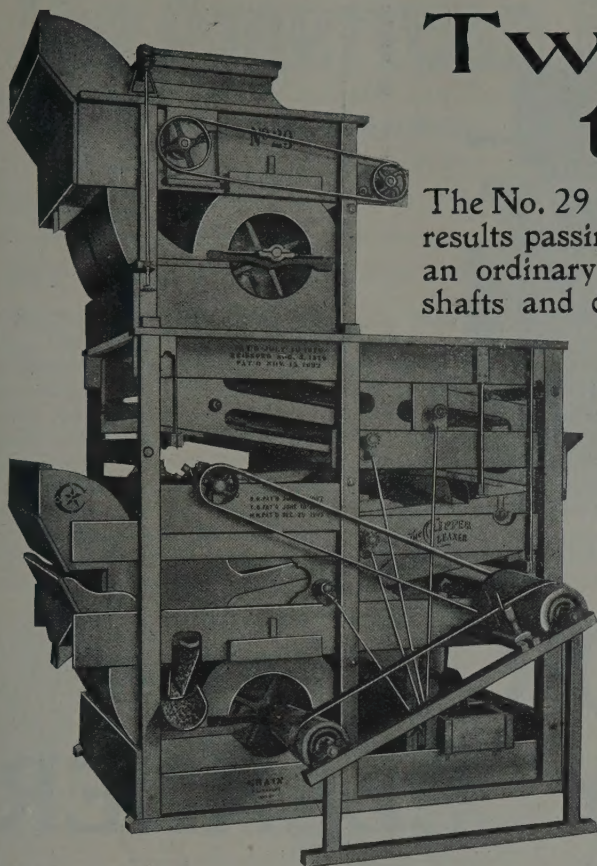
Pacific Coast Representative: O. J. Williams, 428 Monadnock Bldg., San Francisco, Cal.

Texas Representative: D. J. Hayes Co., 615 Washington Ave., Houston, Texas.

## **THE WILLIAMS PATENT CRUSHER & PULVERIZER COMPANY**

2701 North Broadway, ST. LOUIS, MO., U. S. A.





## Two Machines for the Price of One

The No. 29 Double Blast CLIPPER Cleaner will give practically the same results passing the stock once through the machine that can be secured on an ordinary cleaner by passing the stock twice. It has two vertical air shafts and double, counter-balanced shoe. This doubles the screening surface and the stock passes through two air blasts.

The No. 29 is unequalled for cleaning all kinds of field and garden seeds and for thoroughly cleaning and grading all kinds of grain and seed corn.

Each of the four screens is equipped with our Perfect Traveling-Brush Device which prevents the perforations from clogging.

It is also equipped with our Special Air Controller, one of the many good mechanical features of our Cleaners. The Air Controller permits of wide variations of the air blast and **GUARANTEES ACCURATE RESULTS.**

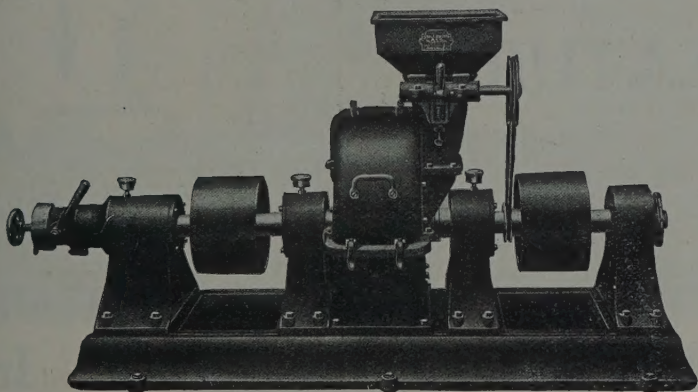
If you are looking for a machine with large capacity that will do the **BEST WORK** with the **LEAST POWER**, ask us for a description of the No. 29.

**A. T. FERRELL & CO.,**

-

**SAGINAW, MICH.**

## Better Work = Bigger Profits



### The Monarch Ball Bearing Attrition Mill

With this new mill we guarantee a **saving of one-third in power.** The mill cannot get out of tram, has dust-proof guaranteed bearings, and interchangeable parts. **It is the last word in feed grinding.**

*Full particulars on request.*

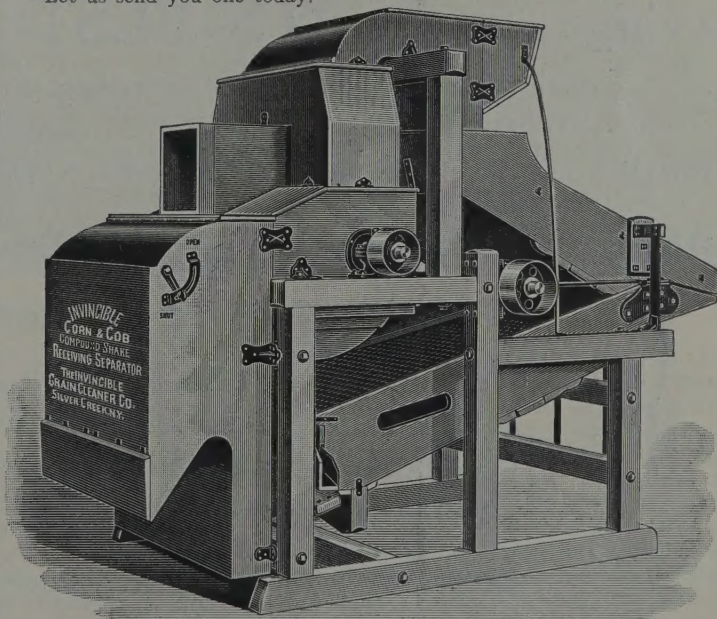
**Sprout, Waldron & Company**  
Box 320 MUNCY, PA.

## More of the INVINCIBLE Corn and Cob Separators

are being sold and used today than all others combined—

There is but one reason for it—they do the work better than others.

Let us send you one today.

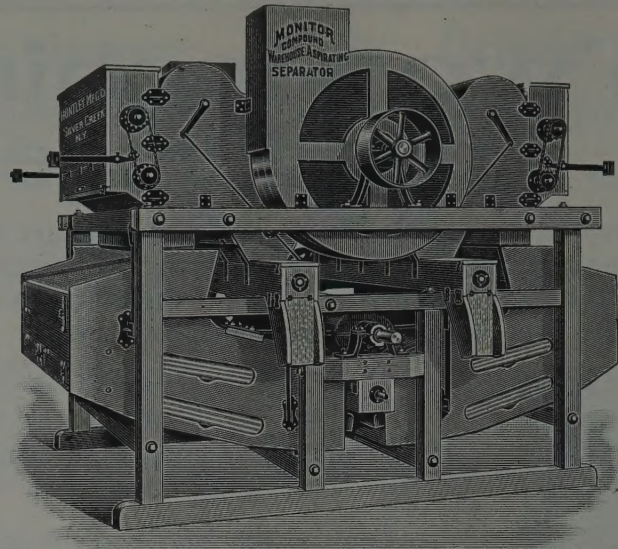


**INVINCIBLE GRAIN CLEANER COMPANY**  
SILVER CREEK, N. Y., U. S. A.

— REPRESENTED BY —

J. H. Pank, 512 Traders' Bldg., Chicago, Ill.  
F. J. Murphy, 225 Exchange Bldg., Kansas City, Mo.  
The Strong-Scott Mfg. Co., Minneapolis, Minn.  
C. L. Hogle, 526 Board of Trade, Indianapolis, Ind.  
Frank E. Kingsbury, Terminal Hotel, St. Louis, Mo.  
J. J. Ross Mill Furnishing Co., Portland, Ore.  
Chas. H. Sterling, Jefferson House, Toledo, Ohio.  
C. Wilkinson, 6027 Chestnut St., Philadelphia, Pa.





MONITOR DOUBLE ELEVATOR SEPARATOR

# MONITOR LARGE CAPACITY CLEANER

This Separator is unlike anything in grain cleaners.

Handles enormous quantities of grain, and is adapted to any class of work.

It will perform air and screen work superior to other cleaners, and do more work with less expense and floor space.

**A  
Big  
Saving  
In  
Floor  
Space**



## ITS BEST FEATURES

- COMPOUND DRIVE**—The two shoes are of exactly the same weight.
- AUTOMATIC FORCE FEEDER**—New in design—our own exclusive production.
- PATENTED AIR EQUALIZING ATTACHMENT**—Insuring a wide range of air cleaning results.
- THREE SCREEN SEPARATIONS**—This equipment enables the operator to handle various kinds of work.
- DISC OILING ECCENTRICS**—The greatest improvement of recent years in grain cleaner building.
- DEEP RESERVOIR RING OILERS**—These used for both the main shafts.
- AUTOMATIC SIEVE CLEANERS**—Of the well known Monitor type.
- GENERAL CONSTRUCTION**—Guaranteed perfect in every detail.
- RESULTS**—Extraordinary screen and air separations—saving in floor space, power, care and attention.
- CAPACITIES**—1000 to 7000 bushels per hour.

**A  
Big  
Saving  
In  
Power**



### HUNTLEY MFG. CO.

Minneapolis, Minn.—A. F. Shuler, 316 Fourth Avenue South  
Chicago, Ill.—F. M. Smith, 608 Traders Building  
Portland, Ore.—C. J. Groat, 404 Concord Building  
Kansas City, Mo.—J. H. Henderson, 1 Board of Trade

**Special  
Agents**

### SILVER CREEK, N. Y.

St. Louis, Mo.—S. J. McTiernan, 25 Merchants Exchange  
Jackson, Mich.—A. H. Smith, 206 Lansing Avenue  
Akron, Ohio—A. S. Garman  
Owego, N. Y.—J. H. Foote



# The American Elevator and Grain Trade

A MONTHLY JOURNAL DEVOTED TO THE ELEVATOR AND GRAIN INTERESTS.

VOL. XXIX.

CHICAGO, ILLINOIS, DECEMBER 15, 1910.

No. 6.

## NEW CANADIAN PACIFIC ELEVATOR.

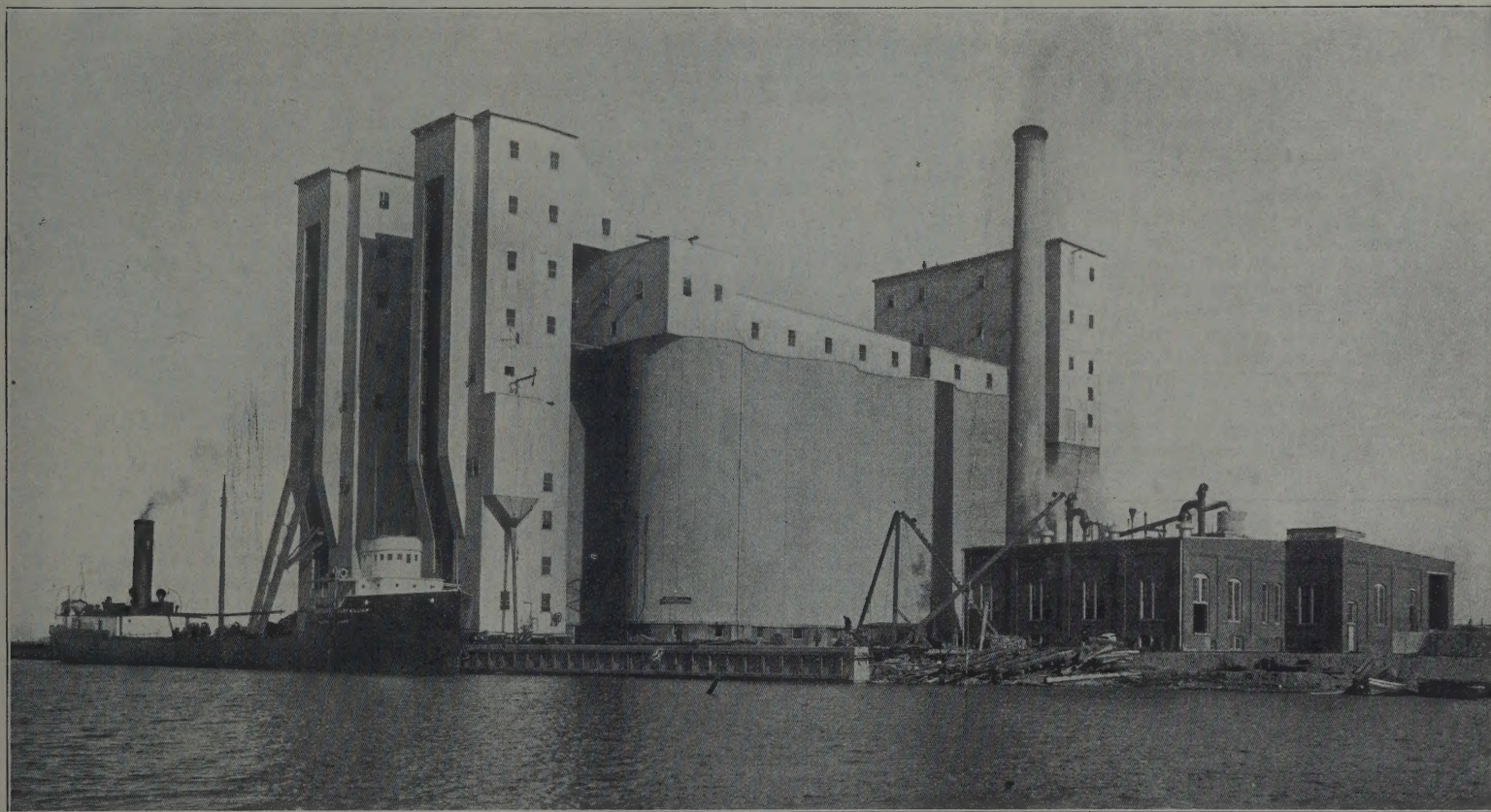
The Canadian Pacific Railway, in possession of large elevators at the head of Lake Superior, found it necessary to provide additional facilities at the eastern end of the lake haul, where their numerous grain vessels could be readily unloaded and the grain either stored or reloaded into railway cars for shipping eastward through Canadian territory. Hence they obtained a site at Victoria Harbor, Ontario, at the extreme eastern end of Georgian Bay, about seven miles from Midland. With an island for a foundation, the company will have an ideal site for their terminal after the extensive dredging

clean-up shovels is provided to bring the grain to the legs as rapidly and economically as possible. The marine legs deliver the grain to 1,000-bushel scales, after which it is elevated to the top of the towers and by an arrangement of spouts and conveyors dropped into any bin of the storage or working house.

The storage house consists of 32 cylindrical, reinforced concrete bins 33 feet inside diameter, and 31 interspace bins, each of which holds about one-fourth of the capacity of a cylindrical bin. All the bins have hoppers bottoms, so are self-emptying. The present total capacity of the storage house is two million bushels, and the plant is so arranged

plant is driven by electric motors. The working house was originally designed for twice the present size, with double the present equipment of legs and scales, so that when business increases to require faster loading the shipping house can readily be enlarged to supply the demand.

To provide power for all this machinery and light for the buildings and yards a modern power plant has been built. This plant is equipped with four 250-H.P. water-tube boilers which supply steam at 175 pounds pressure to two 500-K. W. Westinghouse-Parsons Turbo-Generators. The smokestack is of reinforced concrete, 160 feet in height.



CANADIAN PACIFIC RAILWAY ELEVATOR AT VICTORIA HARBOR, ONTARIO, CANADA, ON GEORGIAN BAY.  
Designed and erected by John S. Metcalf Co., Engineers, Montreal and Chicago.

and filling operations now under way are completed.

Their new elevator plant has just been completed, consisting of two marine towers for unloading lake vessels, a two-million-bushel storage house, a working house for loading cars and a 1000-K. W. power plant to supply the necessary power for operating the machinery.

Each marine tower is 150 feet in height, is built of structural steel, covered with corrugated iron and mounted on 40 heavy car wheels. Steel stairs are provided from bottom to top, and the roof and all the floors are of concrete. Each tower is self-propelling, traveling independently on the double track between the storage house and the slip, and can thus work to its full capacity regardless of the spacing of the hatches and different capacities of the various holds in the boat. The marine legs are specially designed so that they can enter passenger boats as well as the freighters. Each marine leg will elevate 20,000 bushels of grain per hour on the dip, and a complete set of air-operated shovels and

that future extensions may be made to raise the capacity to ten million bushels. With an extension of the storage, additional marine towers also are contemplated.

The working house, or shipping elevator, is also of concrete to the top of the bins and has a structural steel cupola covered with corrugated iron. All of the floors and roofs are of concrete. The storage capacity of the working house is comparatively small, being about 85,000 bushels only, as this part of the plant is intended principally for weighing and shipping the grain to railway cars. For this purpose there are provided two 2,000-bushel scale-hoppers, each on a 120,000-pound scale; four car-loading spouts lead to two loading tracks, one on each side of the house, each running through a track shed.

This house will be able to load 200 cars in a 10-hour day. When necessary the cars can also be unloaded in the working house and boats or barges can be loaded by a special boat-loading spout on one of the towers. All of the machinery in the elevator

A system of 750 incandescent lamps and 12 arc lamps makes the operation of the entire elevator plant as easy at night as in the day time. There are also installed complete systems of telephones, electric signal lights and bells, and dust collectors. The entire plant is absolutely fireproof as, with the exception of the transmission ropes, there is nothing combustible in it. Wire glass is used in all of the windows and the electric wiring is all in metal conduits. As an extra precaution for the protection of cars and boats, a fire-pump has been provided which supplies water to a number of hydrants around the elevator. A concrete wharf 240 feet long, carried down to a depth to provide for 25 feet of water, was built along the front of the elevator.

In addition to the new elevator plant just completed, three-quarters of a mile of wharf, 300 feet of flour sheds and 700 feet of freight sheds are now under construction. The entire work of the elevator plant, wharves and sheds is being done under the direction of J. G. Sullivan, assistant chief engi-



neer of the Canadian Pacific Railway, with resident engineer G. G. Ommanney in general charge at Victoria Harbor. All of this work was designed and is being executed by John S. Metcalf Co., grain elevator engineers of Montreal and Chicago. The total expenditure for this construction will be in the neighborhood of \$1,100,000.

The greater part of the elevating and conveying machinery and all of the machinery for the marine legs were furnished by the Webster Mfg. Co. of Chicago.

### RATES AND EFFICIENCY.

Nothing in the course of the inquiry by the Commerce Commission into the propriety of permitting the railroads to advance their rates can compare in its importance with the statement by Louis D. Brandeis, counsel for the traffic committee of the commercial organizations of the Atlantic Coast ("the shippers"), that the proposed increase is not reasonable since greater efficiency of management would reduce the cost of operation far beyond the sum expected to be realized by the proposed new rates. The press sensationalized Mr. Brandeis's statement that scientific management would reduce the cost of operation by a million dollars a day, and railway men pooh-poohed the idea as absurd; but when Mr. Brandeis in support of his proposition put Mr. Harrington Emerson and other experts on the stand he substantially "proved his case."

Mr. Emerson, for example, is an engineer who has studied efficiency not only independently of F. W. Taylor and H. L. Gantt, other witnesses and the reading authorities on modern industrial efficiency, or "scientific management," but as long ago as early in the '70s, during the Franco-Prussian War, at the close of which he published a pamphlet on the German staff efficiency that was commended by the Germans themselves. Subsequently he was employed as expert counsel to develop scientific systems of management of certain American railways, notably the Santa Fé, in certain departments of which the results of his counsel have justified his prompt reply to Commissioner Prouty, that in his opinion "by the introduction of a proper efficiency system the railroads of the United States could effect an economy of perhaps \$300,000,000 a year or not less than \$1,000,000 a day."

This economy he would effect by scientific management of the shops, the average efficiency of which in railroad and general industrial plants in America is very low in spite of our self-laudations; by reform of repair methods; by fixing a standard of shop-efficiency of demonstrable practicality and working toward that; and by establishing a "road unit" of locomotive performance, or operating practice, and maintaining it. He demonstrated that railway management has expected too much of the economies of reduced grades, straightened curves and improvement of roadbeds and bridges, on which such vast sums have been spent, while at the same time so lax has been the shop management that on the Santa Fé system belting alone (to cite one petty example only) was costing annually 100 per cent of its cost for maintenance with belt failures of 300 a month, which scientific management speedily reduced to 50 failures and to but 14 per cent of the cost for maintenance. So little is shop cost understood by railway men that Mr. Emerson cited the case of a manager who criticized as too low an estimate of \$37 as the fair annual cost of car maintenance only to find that on his own road the cost had been reduced to \$31.01 and he did not know it!

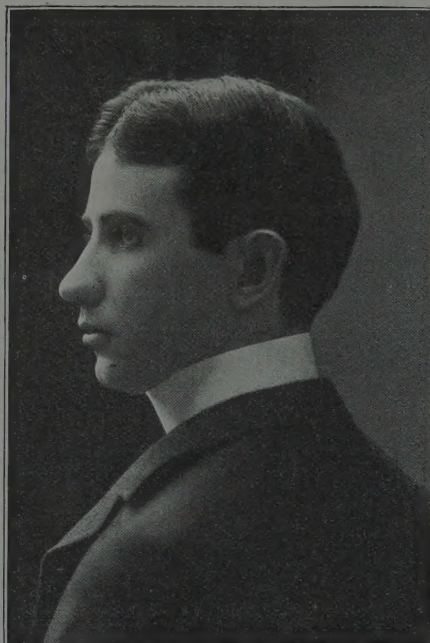
It is very true that high industrial efficiency is often a matter of human nature, and is involved in the stupidity of short-sighted self-interest of workmen and sometimes others in interest. As a commentator on Mr. Brandeis's foreword to Mr. Emerson's testimony has said, "The modern industrial system and the spirit of trade-unionism have combined to intensify among the workers the delusion that it is to their interest as a class to 'make work,' and the extent to which this spirit of 'making work' not only diminishes the product of human labor, and with it the material comfort of all, but

lowers the moral tone of the working people, is quite beyond estimation."

Difficult as it is to overcome this deplorable spirit, nevertheless Mr. Emerson's testimony shows that it can be done; that workmen can by proper management be invested with a self-respect that is convertible into dynamic pride and interest in their work. This being so, how can anyone, from the standpoint of good morals or sound industrial policy, contemplate the granting of even a temporary financial relief, such as would result from enforced contributions by the public through increased rates when that relief would but postpone for another season the reforms in railway management that Mr. Emerson has shown to be so immediately necessary? It is bad in morals and worse business to put a premium on incompetency. The public has been lenient long enough; it is now up to the railroads to manage their business with the same degree of skill and efficiency that private industries must exercise or suffer the pecuniary penalty of mismanagement.

### GEO. W. HILL.

Geo. W. Hill, of Nashville, Tenn., who does business as Geo. W. Hill & Co., as a young man pre-



GEO. W. HILL.

ferred assuming responsibility along with the work involved in doing business to working without responsibility; wherefore after three years of office and other duties with a local grain and seeds firm, he struck out on his own account in the commission brokerage business as Geo. W. Hill & Co. This was in 1895. The business prospered from the start and has grown year by year from that day to this; until it has become one of if not the largest strictly commission business in grain south of the Ohio River.

Mr. Hill neither buys nor sells grain of any kind on his own account, but handles everything strictly on account of his patrons, shippers, on commission. He, therefore, is never confronted with a confusion of interests but is always free to serve his clients unembarrassed by other considerations.

Mr. Hill is a member of the Nashville Grain Exchange and of the Grain Dealers' National Association.

It is proposed to go into broom corn in northern Colorado in the neighborhood of Greeley.

The Canadian government standard grades for Ontario winter wheat have been made, namely Nos. 1, 2 and 3 commercial. No. 1 may be red, white or mixed winter, weighing 58 lbs. or better and may show slight percentage of smut; Nos. 2 and 3 must weigh 57 lbs. and vary as to smut; all other qualities are graded separate.

[For the "American Elevator and Grain Trade."]

### A SCOOP-SHOVELER.

BY T. P. R.

A mouse can make dress goods go up quicker than a Republican tariff; and one lone, penniless and friendless man with a scoop-shovel can boost grain prices quicker and higher than Jim Patten with his army of allies and millions of money.

Elevator operators lack poise and foresight. They frighten at a mouse and fail to foresee the consequences. A scoop-shoveler is a mouse in the grain trade.

There is just one common sense way to deal with a mouse. Do not waste energy by chasing him: you stand only one chance in ten of success in a chase. Besides, you are apt to upset a stove or something else in the excitement of pursuit and burn up the whole damn place. Use a trap.

Likewise there is only one sensible way to deal with a scoop-shoveler. It does not pay to chase him with high prices; for a scoop-shoveler with any brains at all can make an elevator operator lose ten dollars to his one and he can keep up the chase until the elevator operator is out of breath or dies of old age. Besides, abnormal prices employed to fight a scooper are apt to upset a territory and spoil a whole season's business. Use a trap.

Ninety-five per cent of all scoop-shoveler shipments are handled by men who have to depend upon the established trade twelve months out of each year for their bread and butter. These men are not fools. Let them know that a certain party is an irregular dealer, a scoop-shoveler, and that to support him by patronage works against the interests of the established trade, and no such receiver or distributor will hesitate one moment in choosing which he will serve.

The day is at hand when elevator operators of northwestern Ohio can get any just thing which they ask from the consuming trade. Our interests are mutual. Our relations are reciprocal. Cooperation is our salvation.

### HOLLAND'S GRAIN TRADE.

Like the United Kingdom, Holland long since ceased to grow grain enough to feed her own people; but as the people for centuries have made their riches in international trade and commerce, the supply of cereals has never failed for home consumption, while those engaged in the local grain trade have conducted a not inconsiderable international trade also. Recent publications of statistical information by the Netherlands Department of Agriculture, Trade and Industry include some data with reference to the grain trade for a period covering over half a century (1847 to 1909) which show a steady and permanent excess of imports of grain as a result of the people's turning to trade or to more profitable lines of agricultural activity than growing grain. Some comparisons are interesting:

	WHEAT.		
	Imports. (tons).	Exports. (tons).	Excess. (tons).
1847-1856 (annual average) .....	36,360	33,280	3,080
1909 .....	1,622,823	1,291,346	331,477

CORN AND RYE (GROUPED TOGETHER).			
	Imports.	Exports.	Excess.
1847-1856 (annual average) .....	93,170	10,430	82,740
1909 .....	1,032,692	455,406	557,286

Other figures stated to be official, but differing somewhat though not materially from the foregoing, are reported by Consul Mahin from Amsterdam and give the imports and exports of grain in 1909 as follows:

Classification.	Imports.	Exports.	Excess.
Wheat .....	2,295,307	1,966,190	329,117
Rye .....	463,307	285,065	178,242
Barley .....	753,014	543,974	214,040
Corn .....	677,101	296,632	308,469
Oats .....	493,301	401,043	92,258
Buckwheat .....	19,914	7,233	12,681

Presumably the foregoing figures do not indicate the volume of this country's consumption or production, but rather the volume of trade done by Holland as a medium for distributing grain to other countries of Europe. This seems proved by the fact



that the imports and exports increased vastly more than the population of the country during the period from 1847 to 1909.

### H. H. DEAM.

The faces of few dealers of Indiana are more familiar or are more heartily welcomed at trade gatherings in that and adjoining states than that of H. H. Deam of Bluffton, Ind. If you, Mr. Reader, are one who do your whole duty to yourself by attending the local and state meetings in Indiana, you will recognize the face of the picture at once and recall more than one pleasant circumstance in connection with meeting the owner thereof.

Mr. Deam is a confirmed Blufftonian, albeit he circulates a good deal. In fact, he has lived in Bluffton all his life with the exception of four years spent at Wichita, Kans. Upon his return from the West, which was in October, 1890, he began work



H. H. DEAM.

for the firm of Studabaker, Sale & Co., and he has been for the past twenty years associated with that firm. Three years ago, the first of last July, J. W. Sale, who had been a life-long member of the business, retired; thereupon a co-partnership was formed by John Studabaker, Sr., with his son, David E. Studabaker, and Mr. Deam, under the firm name of John Studabaker & Son.

Mr. Deam was first employed by the firm as book-keeper and cashier, and as such he handled the accounts for the firm, who were operating at one time as many as eight elevators. A few of these points have been disposed of and a few other new ones have been started under the auspices of the new firm, who during the past season erected elevators on the Bluffton, Geneva & Celina Traction Line, a new line constructed from Bluffton to Geneva, which is to be later extended to Celina, Ohio. These elevators are constructed in the heart of a very productive country and are doing each a nice business. The third elevator was constructed on the Clover Leaf R. R. at Roseburg, a little station six miles west of Marion. The entire number of points operated now by the firm is six; and as an indication of the character of these plants we give a picture of the firm's elevator at Linn Grove, Ind.

Referring to the kind of business the firm is operating, it may be said that at each of these points they handle coal, lime and cement; at two of the points they have lumber yards, namely at Van Buren and Linn Grove. The entire business is managed from the main office at Bluffton, of which Mr. Deam is manager.

The firm has membership in the Grain Dealers' National and the Indiana Grain Dealers' Associations; they also have membership in the Michigan, Ohio & Indiana Coal Dealers' Association, of which Mr. Deam is at the present vice-president, having been elected at the association's last meeting, held in the city of Toledo in July. They have a member-

ship in the National Hay Association also and are very enthusiastic supporters of and workers in each of the associations. Mr. D. E. Studabaker or Mr. Deam manages to attend all the conventions as they are held of the different associations, and takes part in their proceedings.

Needless to say, under the circumstances, that John Studabaker & Son is a "name to conjure with" in Indiana, and is respected wherever it is known.

### SEC'Y WILSON'S REPORT.

The annual report of Hon. James Wilson, secretary of Agriculture was published on December 8. Its general review of the agricultural record of the year is by this time familiar to all, who will rejoice with the Secretary that the country has been so blessed with abundant crops. He rejoices also that the exports have been so large; but now notes a decline:—

Except for two years, 1898 and 1901, the highest balance of trade in favor of this country in foreign trade in farm products was \$488,004,797 for 1908, a year which seems to mark the culminating point in the course of the balance of foreign trade in farm products. In 1909 the balance declined to \$274,210,152, and in 1910 the decline continued to \$198,090,925. "It may be that in 1910 there was not that national surplus of agricultural products to export which the country had offered to other nations of the earth in years preceding; but, however this may be, it is a fact recognized in the exporting trade that prices of farm products in the fiscal year 1910 were high enough to prevent that free export movement which before existed."

High prices are considered; but Mr. Secretary finds that the farmer is not responsible therefor, his share rarely exceeding 60 per cent of the total paid by the consumer.

The review of the work of the Bureau of Plant Industry is interesting but contains no new material of interest, the Bureau working on lines established in the past. As to the Grain Standardization and Seed Testing Laboratories' work, the report says:

#### GRAIN STANDARDIZATION.

That the relations between scientific agriculture and the commercial conditions which affect crops after they are produced are important has of late come to be more fully realized. To improve market conditions where possible is to render valuable service to agriculture.

With this object in view the Department has undertaken a scientific study of the commercial conditions which affect the grain crops after they have been produced—specifically, a study of the meth-

expert who had the corn under careful observation at regular intervals en route. Many rail shipments of corn, principally between the large grain markets, were examined and tested at the points of shipment, and also at their destinations. Corn stored in farm cribs at various points was also under observation at regular intervals.

The most important fact demonstrated is that a large proportion of the corn which finds its way into commerce contains excessive quantities of moisture, that under most favorable conditions no appreciable reduction of this moisture takes place until March and April, and that this excessive moisture is the primary cause of corn spoiling in large quantities under commercial conditions.

The methods of handling and marketing wheat have likewise been studied during the year. More than 300 samples of the various varieties, classes, and grades of wheat were obtained. In co-operation with the North Dakota Agricultural Experiment Station, these samples were experimentally milled and baked with a view to correlating the physical characteristics of wheats with their flour and bread making qualities. The present indications are that these factors may be correlated and a better understanding of wheat values brought about.

The effect of excessive moisture, "weathering," and the sulphur bleaching of commercial oats and barley has likewise been studied during the year, and much information relative to these subjects was obtained.

The results of laboratory experiments with commercial flaxseed indicate that this seed will increase considerably in volume and decrease proportionately in test weight per bushel while being handled and stored commercially, probably on account of the abrasion or roughening of the seed coat during the various handlings necessary.

#### SEED-TESTING LABORATORIES.

During the past year additional seed-testing laboratories have been opened in co-operation with the North Carolina Department of Agriculture and the Purdue University Agricultural Experiment Station. The laboratories in Nebraska, Missouri and Oregon have been continued. The work of each of these laboratories has increased approximately 50 per cent each year since they were started, showing the interest taken in them by the public. The Department is co-operating with state institutions in order that the work may be done locally when analyses can be furnished, with a great saving of time.

During the summer a number of representatives of seed firms have taken advantage of the opportunities offered by the laboratory to become familiar with the technique of seed testing in order to carry on similar work for themselves.

Samples of forage-plant seeds have been collected and examined for the presence of adulterants, and the names and addresses of the dealers who offered adulterated seeds for sale have been published



ELEVATOR PLANT OF JOHN STUDABAKER & SON AT LINN GROVE, IND.

ods employed in harvesting, storing, transporting, grading, and marketing these crops and the extent to which the various methods affect their relative commercial and intrinsic values.

Extensive experiments have been carried on with corn stored under actual commercial conditions in country and terminal grain elevators at various points. Rail shipments of corn from points within the surplus-corn States to export points upon the Atlantic and Gulf seaboard and shipments of a cargo of corn from each of these seaboard to European ports were accompanied in each case by an

as formerly, with the result that fewer lots of adulterated seeds have been found the past year than in any preceding year.

Canadian terminal elevators are still carrying large quantities of screenings, with small demand on both sides of the international line.

Owing to the high price of meats, farmers in Ontario find it profitable to feed wheat, and even good milling wheat is being disposed of in that way.



[For the "American Elevator and Grain Trade."]  
**THE CHICAGO BOARD OF TRADE: ITS  
 USES AND ABUSES.**

BY JULIAN KUNE.

Not many months ago a general outcry was raised against boards of trade in general and against the Chicago Board of Trade in particular. This outcry was heard all over the country, from east to west and from north to south. It was alleged that the existence of these boards and their methods of dealing in the necessities of life were the main cause of the present high cost of living. This erroneous belief became so general that a congressional investigation was instituted and a bill for the suppression of these methods was introduced into that body by one of its members. This bill would undoubtedly have become a law had not the various board of trade organizations of the country, recognizing the danger which threatened their existence, sent some of their ablest members to Washington for the purpose of combatting the wrong impression abroad concerning their organizations and to enlighten Congress upon the subject of dealings in grain for future delivery. For the present, that danger to the boards of trade has been averted, but there is no telling when the feeling stirred up against dealings in grain futures may again manifest itself; but one thing is certain and that is that no amount of repressive measures will be able to turn back the wheels of progress and compel the commerce of the world to readopt the methods of one or two hundred years ago. The boards of trade and their present methods of doing business are as necessary and as indispensable to our present progressive age, as are railroads, telegraphs, telephones, and many other handmaids of our present civilization. To abolish boards of trade and their present methods of handling the immense crops of the country would cause the same chaotic state in agriculture, and to the industries and commerce of the world, as would the abolishment of railroads, telegraphs and telephones and the reverting back to the use of stage coaches and the pony express to carry our mail.

In order to correct these false views, the writer, who for forty odd years has been more or less identified with the Chicago Board of Trade, has undertaken to record the many uses and the few abuses of this world-wide celebrated institution. Not many cities, in either this or any other country, can boast, as Chicago may, of a commercial organization which had its origin within the lifetime of many of its yet living citizens. Some of these citizens were even actively engaged in fostering the first efforts of this Board of Trade and largely aided it to attain its present important position in the commercial world.

When the writer stops to think that when the first call was made for the organization of a board of trade in Chicago he was already pursuing his studies in a far-away college in Europe, he is amazed at the rapid development of this really wonderful organization, which was first suggested in 1845 through a newspaper advertisement signed "Merchant." When we read that first advertised suggestion to organize a board of trade, as published in the "Daily American," we can discern the same purpose animating that pioneer "Merchant" that we find to be the groundwork of the present organization. "Merchant" in his advertisement says: "He suggests a Board of Trade to avoid much trouble and vexation that might have been avoided through the interference of some such institution." That is just the point, as expressed in plain language by this sturdy pioneer "Merchant." Boards of trade are created "for the purpose of avoiding trouble and vexation and to facilitate mercantile transactions."

The above cited suggestion was, however, not acted upon until 1848. At that time the writer was fighting the battles of Hungarian liberation. It seems that the time was not ripe enough for a change which a Board of Trade might cause in the primitive and simple business methods of that day. In 1848, however, the restless and radical spirit of Chicago's business men "resolved to organize a

Board of Trade" by electing one of its leading citizens, Mr. Thomas Richmond, as its president and W. L. Whiting as its secretary. Even in those early days, the elevator interests seem to have been in the fore, as Mr. Richmond was in the elevating business. (Most likely run by horsepower.) Mr. Whiting, the secretary, was a "grain broker," although the writer fails to see the use of a grain broker in those early days, as the grain commission men did all the work themselves; which consisted in buying the grain from the farmers, weighing it, and carrying it in on their backs to their storehouses or to the Richmond Elevator. The grain was brought to the Chicago market mostly in wagons and in bulk, the farmers being too poor to own bags. They covered their wagons with all kinds of horse blankets and quilts taken from their beds. Some of these farmers came from distant farms, some situated from 100 to 150 miles from the city, and the round trip consumed the larger part of a week.

It appears from the records of the Board of Trade Association that the call to organize a board of trade was signed by nearly all the pioneer Chicago merchants of that time. They comprised not merely all those who dealt in grain, but others who were engaged in the various mercantile pursuits. Among those first signers were men who became well known factors in the upbuilding of Chicago's trade and commerce. To mention a few of them, like Philip Wadsworth, Thomas Dyer, John P. Chapin, George Steele, I. H. Burch, John H. Kinzie, B. W. Raymond and Thomas Richmond, would show the calibre and character of these first Board of Trade men.

At this first meeting of Chicago's business men to organize a board of trade there was nothing done except to pass resolutions and draw up by-laws to be adopted at the next following meeting, in April, when a constitution was to be adopted. At this meeting in April, George Smith, the banker, was elected president, who, however, refusing to accept the honor, Mr. Thomas Dyer was elected, as previously stated, president of the new Board of Trade.

#### THE FIRST QUARTERS.

The first local habitation of the Board was over the flour store of Gage & Haines on South Water Street, for which a rental of \$110 was paid. Among its first directors were Messrs. William B. Ogden, Chicago's first mayor (in 1837), A. H. Burley, Thomas Hale, also one of Chicago's mayors, E. H. Hadduck and Julian Rumsey, subsequently one of its presidents and a mayor of Chicago.

This first Board of Trade, being a voluntary organization, without any legal status or charter, was notable for its loyal adherence to and observance of the rules and regulations of this voluntary organization. That spirit of equity and fairness which has made the Chicago Board of Trade the synonym of commercial rectitude animated those early pioneers and became the governing spirit of their successors.

#### THE FIRST DUTY.

The first act of the newly organized Board was the appointing of a fish and flour inspector. Gordon S. Hubbard, once a fur trader and one of Chicago's earliest settlers and meat packers, was appointed fish inspector, while Sylvester Marsh became inspector of flour. These appointments clearly indicate that during the early days of Chicago, the fish and flour trade was an important one. The lake and the rivers of Illinois afforded plenty of fish, and although the vast prairies west and south of Chicago were as yet sparsely settled, farmers brought their wheat to the Chicago market, where it was ground into flour, and this required inspection. It had never occurred to those early Board of Trade men to have the wheat inspected also. Only after wheat had become an article for shipment east of Buffalo, or Black Rock, as the terminology of those days had it, was an inspector of grain appointed.

#### WHAT THE BOARD DID FOR THE WEST.

The vast prairies of the West probably would not have been turned into flourishing farms in such a short time had it not been for the Chicago Board

of Trade. The writer is fully convinced of this. When he reached Chicago in 1855, then almost a frontier town, he could have bought excellent farming land within about fifty to a hundred miles from the city at from two to five dollars per acre. The Board of Trade was then just seven years old; but its organization in 1848 had given such an impetus to Chicago's trade and to the influx of farm-seeking settlers, that it was not long before our harbor was filled with sailing vessels carrying grain from this port to the East, to Great Britain and even to the European Continent. Large steam elevators were substituted for the primitive hand and horse elevators; railroads were built and the farmer did not have to haul his produce hundreds of miles to the Chicago market, for he had a market right at home and he received as much for his wheat and corn, right at his station, as he had formerly after having hauled it a hundred miles into Chicago.

#### THE FIRST BOARD TOO AMBITIOUS.

Very often this infantile struggling Board of Trade undertook to accomplish more than it was organized to do. For instance, it delved into matters that properly belonged to the state or the United States Governments. Its members discussed and attempted to advise how the state banks should be run. They also sent delegates to Washington to urge upon Congress the building of a ship-canal around Niagara Falls; and took hold of many similar propositions which were outside their sphere of action and far beyond their financial ability to carry through. True enough, it showed commendable ambition; but a child should first learn how to creep and then to walk before it attempts to run in a race. Nevertheless, it must be admitted that this very ambitious and enterprising spirit which animated those members of Chicago's first Board of Trade has built up the present influential corporation and aided Chicago to become the second city in the Union and the metropolis of the great West and Northwest.

#### THE VOLUNTARY ORGANIZATION DISSOLVED.

At the April 13, 1849, election Mr. Thomas Dyer was re-elected president. It was at this meeting that the members began to discuss the desirability of investing the organization with some kind of legal authority so as to enable it to enforce its rules and regulations. They began to realize that in an association of business men, however great their desire to act fairly in matters of business, there will arise occasions when an honest difference of opinion may require some authority to enforce its rules and regulations. Instead of applying to the state legislature the Board petitioned the city council to pass an ordinance which would confer upon it a certain kind of authority. The ordinance thus asked for never was passed; for we learn from the records that on February 8, 1849, the state legislature passed a general law relating to the establishment of boards of trade, under which law was organized the first regular Board of Trade of Chicago in April, 1850, after the first organization had been duly declared "dissolved."

#### PRIVILEGES GRANTED TO OLD MEMBERS.

For certain reasons, which the records do not reveal, only new members were required to sign the new Constitution and pay an initiation fee of \$5 (besides \$2 to be paid semi-annually as dues). It is quite easy to explain how under such management at the end of the fiscal year the treasury of the Board should show a deficit of \$146. Undaunted, however, by this poor showing, the Board, in order to provide for this deficit, raised the annual dues from \$2 to \$3, while a resolution was passed by a majority of the members, who deprecated the building up of a privileged class within the Board, requiring old members to sign the Constitution and pay the annual dues of \$3. This stroke of policy, however, bridged over the difficulty only for the time being, for at the next annual meeting, April 13, 1851, the treasury again showed a deficit of \$165.96. To meet this the Board took heroic measures and assessed its members \$2 each. The most discouraging feature of the annual report read at this meeting was not the deficit but the loss in membership, many having left the organization dur-



ing the year. At the suggestion of some members, whose business prevented them from attending the meetings of the Board at 11 a. m., the hour of meeting was changed to 12:30 p. m., in the belief that members who generally devoted the noon hour to their dinners would be willing to cut that hour in two and devote half of it to the meetings of the Board.

[TO BE CONTINUED.]

## NEW PLANT OF THE MARSEILLES COMPANY.

The removal of the plant of the Marseilles Mfg. Co. from Marseilles, Ill., to East Moline, Ill., and the change in firm name to the Marseilles Company mark an epoch in the growth and progress of this great establishment. The Marseilles Company has always been large manufacturers of power and hand corn shellers, horse powers, feed grinders, portable elevators, wagon dumps and grain elevator machinery and supplies; and with their increased facilities at East Moline the Company will be able to handle more rapidly and conveniently

million dollars. It covers with its buildings and yards twenty-eight acres of ground; it is steam heated throughout, equipped with the automatic sprinkler system and besides this there is a 100,000 gallon steel reservoir, mounted on a steel substructure 140 feet high, which rests on concrete foundations. The plant is run by electric power furnished by the People's Power Company of Moline.

About 500 men are employed in all departments and the opening of the year 1911 will find the company with a model plant in every particular and equipped to give perfect satisfaction to all its patrons.

## REPORT AGAINST STATE ELEVATORS.

The Royal Commission of the Province of Saskatchewan, Canada, on November 16, at Regina, reported unanimously against the proposition advanced by the grain growers, that the provincial government should follow the lead of Manitoba and provide funds to take over and operate the grain elevators of the province as public utilities. The Commission has been very deliberate in arriving

ecutive body of which the government shall have no representation whatever. It is suggested that a minimum of 15 per cent shall be paid up by the farmers upon such of the \$50 shares of the company as are subscribed for; that the maximum number of shares allotted to any one person shall be ten; and that 25 elevators be the minimum number proposed to be operated by the company before the central body can be organized and governmental assistance called for. It is suggested that this assistance take the form of a loan for each elevator, such loans to be secured by mortgage and to be repayable in twenty equal annual instalments, principal and interest. The executives of the Saskatchewan Grain Growers' Association are named as a suitable provisional directorate to carry the plan to the point where a permanent directorate can be elected.

For the purpose of securing the maximum amount of local control consistent with ownership by the whole body of shareholders and management through a central board of directors, the Commission recommends that each elevator be a separate unit, or "local," in the company, with a local board



NEW MANUFACTURING PLANT OF THE MARSEILLES COMPANY AT EAST MOLINE, ILL.

the increasing business which has come to them during the past few years.

The new buildings at East Moline embrace a fireproof foundry, 80x463 feet in size, constructed of steel, concrete, brick and glass. This building contains a fireproof pattern vault, two cupolas with a combined capacity of from fifty to sixty tons daily and an overhead trolley carrying system throughout.

There is also a galvanized steel building 80x550 feet, divided into four sections for the blacksmith shop, the rattling and sorting room for castings, and bin room for cleaned and trimmed castings ready for the machine shop. In this building is also the steam plant with a 400-horsepower boiler for heating the entire plant and a warehouse section for steel bars and sheets besides all classes of hardware used in the business.

The main building is of brick, four stories high, 80x552 feet in area, of mill construction, and divided into four sections by fire walls. The first 100 feet of the first floor is devoted to the general offices of the company and a sample room where all the machinery made by the company may be shown in operation. The remaining section of this floor is used as the wood working department. The second floor is used for the iron machine shop and sheet metal shop. The third floor is used for the construction department. On the fourth floor is the experiment department, pattern making and tool making rooms. A large part of this floor is given over to space for painting the finished goods.

There is also a storage building, a galvanized corrugated steel structure 100x600 feet in size, divided by brick walls into three sections of 200 feet each.

The plant represents an outlay of over half a

at this conclusion, so disappointing doubtless to many radical voters, farmers more particularly. Appointed nearly a year ago (February 28, 1910) by the provincial government for the purpose of an exhaustive investigation, the Commission during the past summer visited nearly every important town in the province, as well as Winnipeg, Manitoba, and put innumerable witnesses on the stand in order to obtain the views of all classes of business men and publicists of the province without prejudice as to their opinions, each being permitted to speak his mind freely. The Commission, in short, sought the best advice possible on the state ownership proposition by taking a "consensus of opinion."

While rejecting state ownership, the Commission, as might have been anticipated (it being composed of the secretary of the Saskatchewan Grain Growers' Ass'n, of a member of the lower house of the Parliament, who has been identified with the Grain Growers, and of Prof. Robert Magill of Dalhousie University, Nova Scotia), proposes a characteristic plan for reaching a solution of the "problem" which the farmers find exists in the marketing of their grain. The latter believe that the prices of their grain are manipulated and fixed adversely to the interests of the farmers by a combination of grain merchants operating at Winnipeg; therefore the handling of the grain must be in some way taken out of the hands of these middlemen and the interests of the farmers protected by other influences.

The Commission therefore recommends the formation of a great "co-operative," that is to say, joint-stock, company, the capital of which shall be provided and owned exclusively by the agriculturists of the province, upon the directorate and ex-

elected by the local shareholders. Each such "local" shall contribute one representative to the organization and subsequent annual meetings, at which the board of directors of the whole company would be elected. It is further suggested that the stock subscribed at each "local" be equal to the cost of the proposed elevator, and the aggregate annual crop acreage of the shareholders not be less than two thousand acres for each ten thousand bushels of the capacity of the elevators, or one acre for every dollar of proposed expenditure at each "local."

In support of the suggested scheme, the Commission writes:

The Commission would have little objection to an experiment by the province were it not for the fact that an experiment upon a large scale is being conducted by the province of Manitoba. If Saskatchewan would make an equally serious attempt to develop a co-operative solution of the problem, the Western farmers would soon be in a position to avail themselves of the best results of both experiments. Both plans aim at removing initial storage from the ownership of companies interested in the trading of grain. The one plan aims at ownership by the state and management by the government, and the other aims at ownership and management by the growers of grain. Both plans recognize the strength of the feeling of injustice in the minds of many farmers, both seek to create conditions for the marketing of grain which will give the farmers confidence and satisfaction, and both involve financial aid on the part of the state. The chief difference between the two plans is that in the one the issue is in the hands of the government, while in the other it is in the hands of the farmers themselves, and to this Commission at all events it appears that this difference is in favor of the co-operative plan. This plan avoids many of the risks and limitations of the other plans, and is pregnant besides with possibilities for the future.



[For the "American Elevator and Grain Trade."]

## AN EFFICIENT DEPARTMENT OF WEIGHTS.

BY L. C. BREED.

References have been made in the columns of the "American Elevator and Grain Trade" at various times to the Department of Weights of the Merchants' Exchange of St. Louis, for the two-fold purpose of showing its efficiency and work, and to furnish points to other exchanges in order that they might gain some practical benefit from the experience of a sister organization.

No level-headed grain commission merchant or shipper needs to be told that there is hardly any feature in connection with the grain business in which there is so much friction as the matter of weights. People who are engaged in business are doing so for the purpose of making money, and while thus employed they are desirous of getting along smoothly and pleasantly with all the parties with whom they deal. It is not work so much as worry and fretting, which wears business men out; consequently improvement in commercial methods that eliminates these troubles is "a consummation devoutly to be wished."

The present system under which weights are handled by the Merchants' Exchange has been in

police-duty, etc., is a general service which it is not practicable to collect in fees. Owing to the fact that the Department is not self-supporting, some disgruntled members of the Exchange, oblivious of the good reputation which the Department has earned through the work of the Department of Weights, are unwilling "to bear those ills we have" and prefer "to fly to others that we know not of," in order to save a penny here and lose a dollar there. It is needless to state that said insurgents are not comprised of "the men behind the guns"—those who are active members of the Exchange, who handle the real grain and have important cash business interests of the Exchange at stake.

The organization of the Department is as follows: H. C. Schultz, chairman of committee on weights; John Dower, supervisor; O. Senti, chief clerk; Louis Yates, Culver Hastedt and H. C. Lee, clerks.

Deputy Supervisors—W. F. Shelley, H. G. Milburn, P. J. Barron, Henry Grassmuck, F. B. Caffrey, Raymond Peet, Oliver Dickson, Alfred Izatt, John O'Brien, Bernard Miller, Dave Dobson, D. T. Wisore, P. T. Ryan, W. A. Quillen, L. Henley, R. E. Flynn, Geo. Kaps, J. V. McClelland, W. H. Hollbrook, W. T. Crawford, W. A. Schmidt and H. F. Kilby.

Car Inspectors and Watchmen—Edwin Adams, Edw. Quesnel, W. A. Steed, F. A. Guyol, Thos. E.

[For the "American Elevator and Grain Trade."]

## REMARKABLE SERIES OF COINCIDENTS.

BY N. L. WILLET.

I received your issue of the "American Elevator and Grain Trade" for November 15 in the mail of yesterday morning at 9 o'clock. The story is worth relating possibly as to three strange coincidents incident to this number of your paper. The question is this: Is the world an extremely small one, or, the world being a wide one, does your journal cover this wide expanse as the dew covers the earth?

I spend my summers at Winthrop, just above Boston. In going across the ferry, and just at the terminus of the ferry, I saw almost daily last summer the new B. & A. Elevator holding 1,000,000 bushels. I tacked up yesterday morning over my desk a panoramic view of Boston Harbor. It showed, as one of the most conspicuous objects of the harbor, this new elevator. On opening up your issue, on the first page, I found yesterday morning the picture of this magnificent elevator!

Some two weeks ago a Mexican friend mailed me a pint of Garbanzos peas. I ate them, cooking them like Boston baked beans. I found them far superior to the Boston baked beans in every way. They are more meaty, sweeter and are much softer; they are two and a half times larger than the Boston baked bean; they cook more easily; they are large, white and round and make a splendid new dish. Our firm (N. L. Willet Seed Co., Augusta, Ga.) get out a large seed catalogue. We are prime headquarters here; and I have devoted large attention to descriptions of our Southern forage plants, of which we have such a wealth, such as cow peas, some thirty or forty varieties; velvet beans, two or three varieties; soy beans, several varieties; vetches, three or four varieties; sorghums, seven or eight varieties, etc., etc. Most of these are legumes. Now, I have never seen in public print a description or notice of Garbanzos peas. I went to the trouble, however, to find out something about them. This was for the purpose of listing them in my next (January) catalogue. I got a very complete description and wrote it out and had it on my desk before me yesterday morning. In looking over your issue at the same time, what should I find, on the 302d page, but an exceedingly interesting description of the Garbanzos from Consul Dye, Nogales, Mexico. Now, were not these two coincidents exceedingly queer?

Then, again, I dined day before yesterday with Mr. W. J. Hollingsworth of this city. What should I find, on page 273 of your issue, but a handsome photograph of him and a column concerning the fact of this excellent gentleman's having been put recently into the directory of the Grain Dealers' National Association.

The above shows how your paper covers the earth, and it shows how vast are its subjects, or else the three facts narrated above would never have happened.

## SOME CORN YIELDS.

The capital prize of the New England Corn Show at Worcester on November 14 *et seq.* for the best crop of "shelled corn (any variety) showing the largest yield, on a water-free basis, in food constituents, obtained from one acre grown exclusively on fertilizer," was awarded to Perley E. Davis, of Granby, Mass. His yield at harvest time was 127 bushels shelled corn, which, reduced to 12 per cent moisture, the average in crib-dry shelled corn, was found to equal 103.23 bushels of shelled corn. This is called by the Worcester experts "a new world record on a scientific basis."

"There are others," however; *vide* the following claims taken from the country papers reaching this office:

At the Petersburg (Va.) Fair prizes were awarded to Morris Algiers, of Dinwiddie County, for a yield of 166 bushels of corn; Arthur Belwood, of Chesterfield County, for 160 bushels; John Jenkins, of Nottoway County, for 135 bushels; M. L. De Shazor, of Dinwiddie County, for 120 bushels, and



A PORTION OF THE WORKING FORCE, MERCHANTS' EXCHANGE WEIGHING DEPARTMENT.  
Chief Dower in middle of front row.

effect for over eight years. It superseded the control of the weighing of grain by the State Board of Warehouse Commissioners whose execrable conditions were responsible for the change, since the St. Louis market was fast acquiring an undesirable reputation in this direction.

The fine picture published herewith, taken on the east front of the Merchants' Exchange Building, shows a part of the force of the fifty employees of the Department. Its work is to supervise the weighing of all grain received at St. Louis, East St. Louis, and points contiguous thereto. It gets a record of conditions and seals on cars at the point of unloading at and as soon as they reach the inbound yards. It has private watchmen at railroad yards from which grain is hauled to be weighed on wagon scales. It has its own men to examine and test scales at the sixty points where Merchants' Exchange weights are expected. These weights are so much in favor with country shippers that many shipments are made carrying instructions to consignor to sell on arrival only on the Department's weights. Furthermore, the various local railroads issue freight bills on Merchants' Exchange weights.

Over and above the receipts for weighing, there is a deficit in the Department budget, which is met from the current income of the Exchange. It is quite plain to any grain man that testing scales,

Clifford, W. E. Bement, Fred Worstell, Chas. A. Hollweg, B. Enright, John J. Schulte, L. J. Doyon, W. H. Weil, M. F. Moritz, W. F. Powers.

Scale Men—Jas. McGregor and J. P. Willen.  
Moisture Tester—J. F. Comerford.

The screenings which the Canadians reject are coming to the United States, some 12,000 tons having been landed at Duluth last fall. These are distributed to feeders at Minneapolis and eastward.

"There has never been a better tribute," says New England Homestead, "to the practical side of scientific agriculture than is found this year, which has practically a normal yield of corn in the face of weather conditions which a generation ago would have resulted in partial crop failure. This year the corn crop in the seven surplus states is estimated at 1,705,000,000 bushels against a crop in the same territory last year of 1,589,000,000 bushels. The yield in the surplus states, which include Ohio, Indiana, Illinois, Iowa, Missouri, Kansas and Nebraska, is a matter of large importance. The yield is equal to or slightly above the yield in each state for the past two years with the exception of Ohio, where there is a shrinkage of about 10 per cent. This fact emphasizes the showing that the large crop this year is the result of acreage increased rather than any change in rate of yield."



W. P. Prossie, of Dinwiddie County, for 103 bushels to the acre. (In the ear, doubtless.)

Art Millard, on a farm south of Webster City, Iowa, claims that he picked on a certain part of his farm corn that yielded 255 bus. (80 lbs.) per acre.

Jos. Fagg, north of Eldora, Ia., claims 125 bus. average from 30 acres of sod corn.

Stephen Henry of Natchitoches Parish, La., was the winner of a medal offered by Gov. Sanders to the member of a boys' corn club producing the most corn per acre. His yield was 148 bushels.

The largest yields of corn per acre this season are in Pennsylvania and the big corn states; smallest yields are in the South and Southwest. Pennsylvania leads with 41 bushels an acre. Indiana has 39½, with Illinois 39, Iowa and Ohio have 36, Missouri 32, Nebraska 25, Kansas shows only 19 bushels an acre, Oklahoma 10, Texas 20. The South has much more corn this season than usual, but yields per acre there are smaller than in Northern states. Kentucky leads with 28 bushels, Georgia is the smallest with 14.—Frank I. King.

### BARNARD'S DOUBLE SEPARATOR.

The separator shown in the accompanying picture, which is known as Barnard's Double Separator and is manufactured by the Barnard & Leas Manufacturing Company at Moline, Ill., is the latest development by that company of the warehouse and elevator separator; and although it is saying a good deal, the machine is offered to the trade as a machine in which every feature has been improved over former machines of this type or is entirely new.

In handling rough grain in elevators it has been found necessary, owing to the large amount of straw and other coarse impurities, to use only sieves having their motion in line with the travel of the grain so that the trash is kept moving and caused to tail over. But sieves of this class necessarily have to be larger than the actual capacity required, in order to prevent tailing over of the grain with the impurities. This of course leaves a large portion of the perforated sieve bare, or free from grain, and carrying only the impurities. Consequently many of the impurities find their way through the sieves.

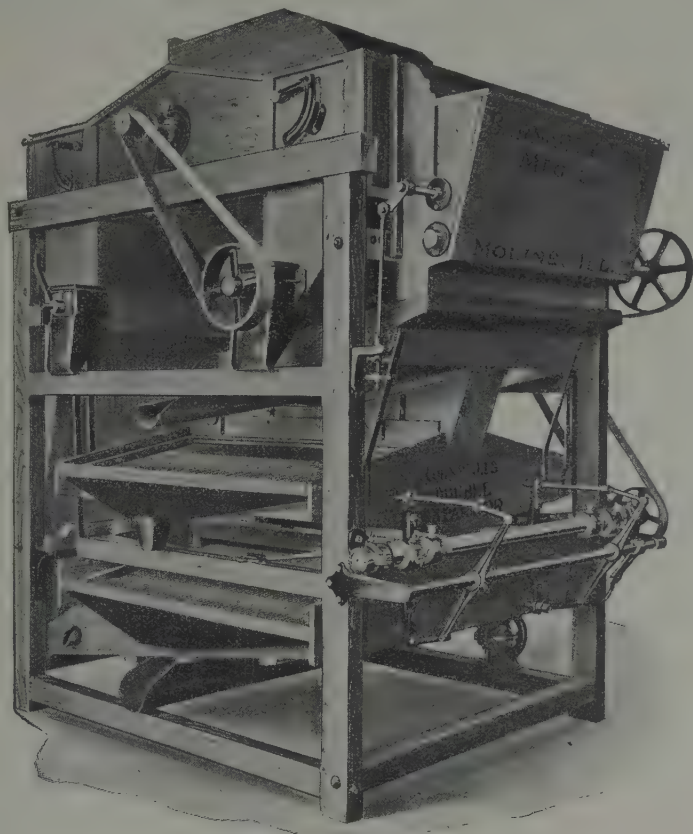
The grain enters first upon a sieve having an end-shake, or motion in line with the travel of the grain. This sieve being large, gives ample capacity so that nearly all of the trash is removed at this point and is discharged separately. Consequently it is not mixed with the oats or other coarse grain re-

double side-shake sieves through opening on each side, that are controlled by automatic gates.

The first, or upper, edge of these sieves is perforated with fine holes for removing the weed seeds, sand, etc. This location for the sand sieves is found to be more efficient than any other because the fine sand and seed is shaken to the bottom of the mass while being spread in the feeding channel, thus bringing them next to the seed sieves and under

metal from sagging and insure a perfectly level sieve during its entire lifetime. The air separations are practically perfect.

One striking feature of the separator under consideration is the accessibility and simplicity of every part, every sieve being under the eye of the operator and removable easily and quickly without disturbing any other part of the machine. The capacity of the machine in sieve area has been greatly



BARNARD'S DOUBLE SEPARATOR.

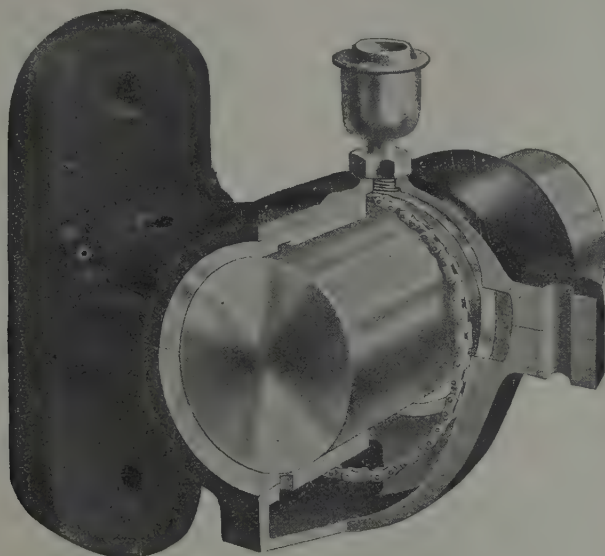
the mass of grain as it passes out of the gates. Both the seed sieve and the grain sieve being on the same plane, they are kept perfectly clean by the same set of sieve cleaners.

This sieve-cleaning device, which is used on other separators by this company, is believed to be superior to any other device of the kind on the market. Every inch of the sieve is thoroughly cleaned

increased and on account of this and the fact that there is very little tendency to tail over, the operator can use quite fine sieves and get good capacity.

The general construction of the machine is first class. The best of material is used, and as will be seen by the minor cuts, bearings are all chain-oiling and the eccentric boxes self-oiling, so that heating when oil is supplied is prevented. It is sold under the usual guarantees.

Kingston, Ont., handled to December 1 this year 14,950,418 bushels of western grain, being the largest amount in the port's history. Of the total 13,889,530 bushels was en route to Montreal and was

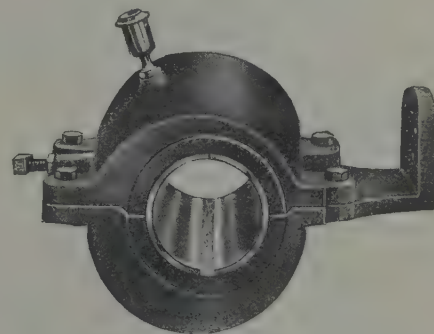


BEARINGS OF BARNARD'S DOUBLE SEPARATOR.

moved from wheat by the finer side-shake sieves and the valuable portion of the tailings is left free from trash and can be sold for feed or mixed with other coarse grain.

The grain from the first sieve is distributed in a feed-box, or channel, on top of the next sieve, by means of which it is spread and delivered to the

several times a minute, while the brushes, which are under the sieve, lift the trash out of the holes and cause it to tail over instead of assisting it to pass through with the grain. A valuable feature of this device is the arrangement of the brushes which are only eight inches apart under the entire width of the sieve and consequently prevent the perforated



ECENTRIC BOXES, BARNARD'S DOUBLE SEPARATOR.

transshipped into river barges. One hundred and eighty-eight cargoes arrived there through the Welland canal.

The U. S. Treasury Department is sending out a notice to the Collectors of Customs to the effect that the Secretary of Agriculture has requested that hereafter the collectors at border ports do not take further samples of cereals, flax, beans and peas, except as specially requested by the branch laboratory having charge of that particular district.



## THE SENSITIVE PLANT.

Lem Hawkins 'll tell you th' wheat's taking root,  
An' th' weather is fair, but it don't hardly suit;  
It's a little too warm, an' a few cloudy days  
Would help out a lot on th' crop he will raise.  
Lem Hawkins says wheat is th' ticklishes thing  
An' th' easiest hurt, an' you can't tell in spring  
Ef it's goin' t' make crop, an' about th' time when  
You think she's all safe, why, she's ruined again.

Lem Hawkins tells me if th' weather'd drop  
About thirty degrees he might git half a crop.  
His wheat promised well, but he thinks like as not  
It'll all shrivel up ef it keeps bein' hot.  
Th' spring started wet an' she got sech a stand  
An' stooped out so thick that he figgered his land  
Would perduce a big yield, but he thinks he is beat  
Becuz weather like this is jist killin' his wheat.

Lem Hawkins told me 'bout th' first of July  
Thet he might git some wheat ef it quit bein' dry;  
He thought thet his prospects was finer'n silk;  
But it come dry an' hot with his wheat in th' milk.  
Lem says ef it rains an' keeps cool he may grow  
A crop, but his wheat's coming into th' dough  
An' th' weather is pleasant—hard weather to beat—  
But it ain't jist th' weather that's best fer th' wheat.

Lem Hawkins he says ef th' balance o' June  
Ain't too cool er too hot, ef it don't rain too soon  
Er hold off too long, ef th' month of July  
Ain't too hot er too cold er too wet er too dry,  
Ef th' ain't any rust, ef th' straw ain't too short,  
Ef th' kernels don't blight an' git filled as they ort,  
Ef th' ain't airly frost, er too blisterin' heat,  
Wal, mebbe, perhaps—wal, he might thresh some  
wheat!  
—J. W. Foley, in an Exchange.

## COMMUNICATED

[We invite correspondence from everyone in any way interested in the grain trade on all topics connected therewith. We wish to see a general exchange of opinion on all subjects which pertain to the interest of the trade at large, or any branch of it.]

## SOLD OUT BUSINESS.

*Editor American Elevator and Grain Trade:*—We have sold our business to Geo. Leonard. The business will be called the Hartwick Larube Co. hereafter.  
Yours truly,  
Hartwick, Iowa. HAKEMAN BROS.

## NOT YET COMPLETED.

*Editor American Elevator and Grain Trade:*—I have been shipping grain from this place for over a year, but have not yet entirely completed the work on my elevator.  
Yours truly,  
Eldorado, O. A. W. S. LOCKE,  
Per McC.

## SHUT DOWN FOR THE WINTER.

*Editor American Elevator and Grain Trade:*—Please change the address of our papers from Bridgeburg, Ont., to Chamber of Commerce, Buffalo, as we have closed down the Anderson Elevator for the winter.  
Yours truly, H. G. ANDERSON & CO.

## MAKING IMPROVEMENTS.

*Editor American Elevator and Grain Trade:*—I am making considerable improvement to my elevator, adding a brick engine house, detached, and room for a feed mill and corn sheller.  
Yours truly, J. J. HADLEY.  
Osco, Ill.

## INSTALLING MACHINERY.

*Editor American Elevator and Grain Trade:*—Please change the address of my paper to Danvers, Ill., as I am here installing machinery in a new elevator for the Johnson Grain Co.  
Respectfully, S. J. LENICH.  
Danvers, Ill.

## NEW ELEVATOR NEARLY READY.

*Editor American Elevator and Grain Trade:*—We are erecting an elevator and warehouse at Manhattan to be used exclusively for handling first-class seed corn and a full line of field seeds, such as alfalfa, millet, cane, Kafir corn, etc. We hope to have it ready for business about January 1, 1911. We had a large acreage this season of pure bred seed corn, and have had the most favorable weather for watering it.  
Yours very truly,  
GEO. T. FIELDING & SONS.  
Manhattan, Kan.

## UPON THE MATTER OF FREE CANADIAN GRAIN.

*Editor American Elevator and Grain Trade:*—Replying to your favor of the 30th ult., beg to say that I enclose herewith copy of an address I delivered eight years ago on the subject of [and favoring the free] admission of Canadian grain.

Barring the change in statistics, what I would say now would be the same as said then.

Yours very truly,

J. L. McCAULL, President.

Minneapolis, Minn.

*Editor American Elevator and Grain Trade:*—Your favor of the 30th to hand and noted. We have held the opinion for some time that it would be greatly to the advantage of this country as a whole to have Canadian cereals admitted free. It is becoming more and more evident that even with our splendid big crops we cannot produce enough grain of all kinds to take care of our domestic wants at a reasonable figure. Temporarily, of course, it would be a hardship on the American farmer; but the American farmer, in our opinion, has had consideration enough and it is now time to give the laboring man in the city a little attention in the way of trying to cheapen the cost of living.

Yours very truly,

L. BARTLETT & SON CO.

Milwaukee, Wis.

Per B. G. Ellsworth.

*Editor American Elevator and Grain Trade:*—Your letter of the 30th ult., received and contents noted. In reply will say that in the event of a short crop, the consumers would be benefited by free grain and in the event of a large crop with a good surplus for export. Our grain coming in competition with the crops of the world, it would make no material difference in the price of grain raised in this country. There is no doubt whatever that farmers would vigorously oppose admission of Canadian wheat, but it would be to the advantage of grain dealers, exporters, millers and consumers.

Yours truly,

A QUALIFIED EXPERT.

*Editor American Elevator and Grain Trade:*—Noting your request for our views as to the advisability of admitting free of duty Canadian cereals: While, of course, this is not a new question to the grain and milling interests of this country, yet heretofore there has been little hope that our politicians would in any way reduce the tariff on products raised by the American farmer, naturally being apprehensive that any reduction in these duties would cheapen the price to the American grain raiser.

We believe now, however, there is coming about a distinct change of sentiment relative to this tariff proposition as affecting the necessities of life, and that our people, as a whole, are disposed to view this question in a broad manner.

It is obvious that the only interests that could be adversely affected by abolishing the duty on Canadian grain would be the agricultural interests. Canada is not competitive with the United States in corn and scarcely so far in oats, except for manufacturing purposes. So that wheat is the only grain now under discussion. The exportable surplus of Canada is confined to the United Kingdom markets, where Canadian wheat is admitted free of duty, while if shipped to the Continent the duty, we believe to be higher than for American wheat. In any event, their shipments show that England monopolizes this trade. This fact has at times brought about very low prices for Canadian wheat, as is always the case where there is only one buyer. It does not at all seem improbable to us that were Canadian wheat admitted free of duty into the United States, the price would advance to such a point as to enable the Northwestern millers to utilize the Canadian wheat and force the English buyers to utilize the soft wheats from the Atlantic ports. Should this come about, it would give the American people a better bread without additional cost.

As a general proposition, we are in favor of any-

thing that tends to the legitimate broadening of our import and export trade.

Yours very truly,

LOUIS MULLER CO.,

Baltimore, Md.

John M. Dennis, President.

## CARRIERS AND SHIPPERS INDICTED.

The grain trade of Philadelphia was taken by surprise on December 2, when Harvey C. Miller, president of the firm of L. T. Miller & Sons, one of the largest shippers of grain on the Atlantic Coast, and Morris F. Miller, his brother, were put under bonds of \$25,000 each by Judge Emory Speer of the U. S. District Court at Savannah, Ga. It appears that the Messrs. Miller were indicted as implicated with the Atlantic Coast Line Ry. and the Seaboard Air Line Ry. and the Merchants' and Miners' Transportation Co. for specific violations of the Sherman anti-trust and Elkins railway acts.

The indictments would seem to have been asked for by the Commerce Commission. At any rate, in a statement concerning the case, made at Washington, the Commission said that 24 counts were returned against the Merchants' and Miners' Transportation Company; 14 counts against the Seaboard Air Line Railway; seven counts against the Atlantic Coast Line Railway, and 10 counts against the Miller Brothers. The offences covered by the indictments consisted, it is alleged, in the carriage of grain from Philadelphia to Jacksonville by the transportation companies, at a rate of ten cents a 100 pounds, when the rate filed with the Commission by them was fifteen cents a cwt. Harvey C. Miller offered himself to the United States District Attorney as a witness in the case, but the offer was declined, as the official did not want to grant him thereby immunity from prosecution.

Mr. Miller said to the Ledger's correspondent at Savannah that so far as his actions are concerned, and those of his firm, he is positive that when the case comes to trial their innocence will be proven. He explained that the present trouble dates back to December, 1907, when four or five cars of grain were shipped from Philadelphia to Jacksonville, Fla., during an interval when the transportation companies concerned had no tariff. If a tariff existed, he said, he was in ignorance of it; and he said the charges made against him and his brother must be purely technical. He is positive that there are no grounds for indicting his firm, and he places the blame, if blame there be in the matter, directly upon the transportation companies. He says that other grain shippers were granted the same rates as his company and that the indictment brought against him will, no doubt, include other shippers who received the same rates as his firm received.

Morris F. Miller, who was in Philadelphia on December 2, said that so far as he knew the Government is simply working on a theory that will be shown to have no foundation. He said that the cases referred to in the Savannah dispatches deal with several carloads of grain shipped to Jacksonville via Savannah on a through rate of 10 cents per 100 pounds. This grain was first carried to Savannah in steamships of the Merchants' and Miners' Transportation Company from Philadelphia and then by rail over the two roads mentioned in the indictments. Mr. Miller explained that the 10-cent rate is still in force, as it was then, and that every grain shipper in Philadelphia doing business with Jacksonville is still shipping grain to the Florida port at that rate. "We have received no special favors from any transportation company," Mr. Miller said, "and the rate we pay is the same rate charged all other grain shippers."

This attack on the Millers is the aftermath of the investigation of the firm and of the Keystone Elevator Co. in July last, when it was charged that Miller & Sons, the Keystone Elevator Co. and the Pa. R. R. Co. enjoyed such intimate relations, that L. F. Miller & Sons were the beneficiaries of a "cut-rate" in some form. Shippers in July endeavored to show that Miller & Son took advantage of grain shipped under export rates, and instead of sending it abroad from Philadelphia diverted it into domestic channels, thereby saving from 1 to 3 cents



on every hundred pounds of grain shipped. These allegations were vigorously denied by Harvey C. Miller, head of the firm: The Pennsylvania Railroad also made denial of the allegations.

### RICE GROWERS' ASSOCIATION.

The Southern Rice Growers' Association and the Farmers' Rice Selling Corporation were organized at Crowley, La., in November for the purpose of controlling the marketing of rice, the price of which to the growers has, during late years, declined, owing to large production in Louisiana, Texas and Arkansas. The membership of the Association will be mainly Louisiana and Texas rice growers and many rice planters have pledged themselves to market their rice only through the selling agency to be operated by the Association as one of its main functions.

The directory is composed of 21 members, selected from the three states named. The officers are as follows: President, W. B. Dunlap, Beaumont, Texas; vice-president, for Texas, Dr. E. W. Brown, Orange, Texas; vice-president for Louisiana, W. E. Lawson, Crowley, La.; vice-president for Arkansas, to be elected; secretary, A. C. Wilkins, Jennings, La.; treasurer, H. G. Chalkley, Lake Charles, La.; directors—A. J. Harty, Bay City; Dr. W. W. Duson, El Campo; W. G. Lovell, Labelle; J. E. Broussard, Beaumont; W. B. Dunlap, San Jacinto; E. W. Brown, Orange; C. B. Allaire, Anahuac; B. L. Daggett, Elton; E. Darphin, Iola; A. C. Wilkins, Jennings; W. E. Lawson, Crowley; M. Abbott, L. Argent, Frank Bernard, Rayne; Worthy Quereau, Gueydan; L. E. Robinson, Welsh; W. S. Streater, Lake Arthur; T. Heogene Reed, Eunice; J. S. Maubols, Morse, La. The capital stock is \$10,000; and the charter (from Texas) provides that no individual can hold or vote more than 50 shares of the stock at the par value of \$1 per share. It is provided that sales contracts shall be entered into only between the corporation and individuals, and in no case between corporation and aggregations of individuals. The stock will be offered only to farmers. The latter will be allowed to fix the minimum price at which rice shall be sold, and 2 cents a sack will be used for advertising rice. An executive committee of five will have the charge of the management of the selling company, and a general manager will be employed. Leland H. Moss of Lake Charles, La., as legal advisor, stated that in his opinion the charter and sales contract were so drawn that the corporation will not come in contact with the Federal anti-trust statute or with that of any state.

At a directors' meeting on November 19 at Beaumont, Texas, the details for the proposed agency were perfected, and the business of the Agency began on December 7, with headquarters at Beaumont. The following directors were named as executive committee: H. G. Chalkley, Lake Charles; W. E. Lawson, Crowley; A. C. Wilkins, Jennings; W. D. Duson, El Campo; J. E. Broussard, Beaumont. Arkansas is allowed one member on this board, to be named later. The by-laws as revised provide in addition to conditions stated above, the further ones, that no one person shall hold more than \$50 stock in the association; that no proxies shall be allowed at stockholders' meetings or meetings of the board of directors; that no officer shall be paid a salary greater than \$5 per diem and expenses, and that the books and accounts of the association shall be at all times subject to inspection by stockholders or customers, with a penalty for violation of the latter provision.

The first work ahead of the Association is to get the co-operation of the farmers who grow rice. To do this it is proposed to distribute the sales contracts among the farmers and also to hold meetings of farmers in various cities to secure signatures to the contract. This will be the real test of the future of the Association. It will be necessary to secure a sufficient number of contracts to give weight to the Association's plans, and unless the farmers sign the contracts in numbers sufficient to give control of 50 per cent of the crop it can scarcely be hoped that the Association's purpose

will be realized. As to the price of rice the following resolution was adopted:

Resolved, That it is the sense of the meeting that, owing to the wide difference in views expressed by men prominent in the rice industry as to the size of the 1910 crop, and also as to the amount of rice now in the hands of the producers, millers and jobbers, we defer fixing the price of rough rice until a meeting to be held in Beaumont on December 7, when, after a thorough canvass by agents in the employ of the executive committee and their report as obtained is thoroughly considered, the price will then be fixed as high as conditions will possibly justify.

The sales contract provides that the farmer signing shall bind himself as to the number of sacks of rice he will deliver to the Association to be sold and covers that rice of 1910 crop remaining in his control and all his crop of 1911. It provides a penalty of 20c per sack for any rice sold other than through the Association. It fixes the charges for selling at 10c per bag and pledges that 2c of this shall be used for advertising. It further allows the farmer the option of fixing the minimum price at which the Association may sell his rice. The attorneys assert that the penalty of 20c per sack for violation of the contract by the farmer can be collected in a suit at law.

### W. S. POWELL.

W. S. Powell, who acts as grain inspector at Cairo, Ill., under appointment of the Board of



W. S. POWELL.

Trade of that city, is a native of Chicago, where he was born in 1864. After leaving school, he entered the Chicago grain inspection office and climbed by promotion on the ladder of good and faithful work up to the place of second assistant to the chief. He was, with his former superior, S. H. Smith, for whom Mr. Powell, twenty-four years ago, was a helper, among those who started the new system of in-door inspection at Chicago on its way to its present success. Mr. Powell is not only a competent inspector but a good executive officer, and popular among those who know him best.

### A FRENCH CUSTOM.

France has imported a good deal of wheat since the new crop began to move, but the records show imports of only 7,200,000 during the months of August, September and October. The explanation is given by an Antwerp correspondent of the Liverpool Corn Trade News, as follows: "Wheat is only considered imported when it arrives at the customs office of the mill. Suppose, for example, a French miller buys wheat in Antwerp. This stuff will be four to five weeks, and even more, making the journey, Antwerp to Paris; and it is only when it reaches Paris that it will be considered as imported into France. It results from this

that shipments made from Antwerp to France at the end of September will be included in French import statistics of November. We may add to the foregoing the critical state of transport in France, that French millers having plenty of storage room and money enough, have brought much wheat into the ports, but in their storage they have not sufficient wheat for ten days' working. The imported wheat cannot be brought from the ports to the mills."

[For the "American Elevator and Grain Trade."]

### THE CAMPAIGN FOR BETTER SEED.

BY L. C. BREED.

The activity of the Seed Improvement Committee of the Council of Grain Exchanges is very refreshing in these days of "Let George do it." So many promising plans have been suggested to improve the grain output and so few of them have ever amounted to anything, that it is to be hoped that the members of the Council will realize what a tremendous activity they have set in motion and that they will not fail to support it at the proper time.

Mr. Cochrane's paper read at the New York meeting touched a match to a bonfire which rapidly spread to kindred and collateral lines. The millers who want more and better wheat; the grain men and exporters who would like to handle it; railroads which are eager to haul it; and the grain Exchanges which are pondering "How to restore the Grain Trade," are all anxious to co-operate with the Council, and, therefore, it is important that a permanent bureau be organized to carry on the work.

Manufacturers of agricultural implements and cereals by the dozen are proffering their aid, financial and otherwise. The Des Moines Corn Show took up enthusiastically the work of grain improvement and brought the leading men of each activity together to discuss the situation in Iowa.

The committee has also arranged a grain improvement day in January under the auspices of the Missouri Experiment Station at Columbia during the farmers' week, and prominent speakers will be present and address the meeting from each point of view. Maryland has just had such a meeting and other states are swinging in line as rapidly as they realize what the movement means.

This is the first time that the commercial world has systematically joined hands with the scientific and agricultural world, and we cannot urge the Council of Grain Exchanges too strongly to realize what a wonderful movement has begun and to eliminate from their "bright lexicon" the word "Fail."

What is called the most valuable shipment of grain ever carried across the great lakes started from Fort William on November 24 by the steamer Ireland. The cargo consists of 241,000 bushels of flax, valued at \$583,220. The steamer Weeks cleared the day before for Buffalo with a cargo of 238,000 bushels of flax, valued at \$575,960.

Apropos the "beefsteak dinner" of some Chicago Board men on Dec. 12, and the increase of commission rates, Frank I. King remarks characteristically: "The proposed increase might drive some to buying Chicago membership, but it would be very injurious to many who are now members. Many newspapers publish pages of sports and stocks, but neglect the grain markets. Toledo dailies who have sent out test-postals found more readers want markets than sports. Get next to the United and Associated Press and stimulate them. Feed the press with live gossip. Chicago commercial editors do more for the grain markets than all the members there combined. Educate the public. Large majority in the business do not appreciate the benefits of trading in futures. Develop a publicity bureau like St. Louis. Deliver an average of the grade in on your contracts, as Toledo does. Make your contract grades as general and popular as possible. Induce other markets to join in making a slight increase in rates. Let the Council of N. A. G. Exchanges secure action. Don't commit suicide by making the proposed wholesale raise. Expand. Progress."



## GRAIN IMPROVEMENT DAY AT IOWA CORN SHOW.

It is certainly a great pity that a day such as Grain Improvement Day at the Iowa Corn Show at Des Moines, on December 10, could not have been attended by a greater number of people. While it is true that a number of grain dealers were there, as were also a larger number of farmers and fairly large delegations from the terminal markets, such as Chicago, St. Louis, Kansas City and Omaha, yet the Show itself and the afternoon and evening programs were deserving not only of the attention of every farmer and grain merchant in the state but were worthy of a national, or even a world-wide, audience.

The eighth annual exhibition of the Iowa Corn Growers' Association was opened in the Coliseum Building, Des Moines, on December 5 and is scheduled to last until December 17. Saturday, December 10, was set apart as Grain Improvement Day and the program was prepared jointly by Bert Ball, secretary of the Seed Improvement Committee of the Council of North American Grain Exchanges and Geo. A. Wells, secretary of the Western Grain Dealers' Association. The purpose of the day was to bring out new and better ideas for the promotion of the work of improving the grain crops, and to seek to encourage all commercial organizations everywhere to use their influence in every manner possible to secure larger yields and better grain. The program had to do very largely with practical propositions in connection with the cultivation of the soil by the farmer and the selection and preparation of the seed. It was divided into two parts—an afternoon program at which there were four speakers, and also a program following the 6 o'clock dinner, at which J. L. McCaull, of Minneapolis, presided as toastmaster and some two dozen or more speakers were heard, selected from Boards of Trade, the Iowa State College and Experiment Station, the railroads, industrial organizations, the agricultural and daily press, the banks, commercial clubs, and grain dealers' associations.

George A. Wells called the afternoon session to order at 2:30 o'clock, and introduced M. L. Bowman, secretary of the Iowa Corn Growers' Association, who made a short address on the "Improvement of the Oat Crop." Mr. Bowman said he did not expect to tell the farmers anything they did not know but hoped rather to call their attention to things they did know but which they did not practice. Iowa had last year, he said, 4,200,000 acres in oats—just about half the acreage of corn. The average cost of oat growing was \$10.14 per acre, including seed, preparing the ground, harvesting, stacking, threshing and repairs. There are three things that it is of vital importance the farmer should pay greater attention to: First, the possession of a fanning mill; second, proper grading of seed; third, the thorough preparation of the seed bed. The observance of these three things would result in larger and better oat crops.

Prof. H. O. Benson of Clarion, Iowa, county superintendent of Wright County, gave an address on "Teaching Agriculture in the Public Schools." Prof. Benson is considered the pioneer educator in this important specialty in Iowa, and has made a practical application of his idea of interesting the boys and girls of the rural schools of the county in agricultural work. He said there should be less of cube root taught, and all such subjects which are of no practical value to the pupil and more instruction given along the lines of practical and lasting benefit. The girls should be taught domestic science and the boys more things along the line of practical and scientific farming, which, if they were rightly presented, would have a tendency to keep the boys on the farm where they rightly belonged, and to develop their thinking powers and observation as well as purely book studies.

### COMMERCIAL DISTRIBUTION OF GRAIN.

The next speaker was J. C. F. Merrill, vice-president of the Chicago Board of Trade, who made an address on the subject "Commercial Distribution of Grain." Mr. Merrill said:

I am grateful for your invitation to meet with you and to have a part in this discussion. Occasions devoted to the consideration of methods of improving the material well being of the people, or of any distinct class of people, are of importance and of promise to the commonwealth. Of the compliment you have paid to me and to the Chicago Board of Trade which I have the honor to represent, I am deeply sensible. To bring together residents of different sections and of different points of view, that through discussion better conditions shall be sought for and means to realize them, is, as I understand, the purpose of this gathering. I am appreciative of the opportunity, in an humble way, to work with you in so meritorious a cause.

The subject assigned me by your committee is the "Commercial Distribution of Grain from a Board of Trade Standpoint"; or, as I may be permitted to interpret it, "The Functions of the Produce Exchange in the Commercial Distribution of Farm Products."

Out of farm products, in a large degree, comes all new wealth, and without the creation of new wealth there can be no prosperity of the mass of the people. And the cost of living, be it high or low, depends in a large degree on production by the farmers. The food necessities of the nation, production, transportation and distribution, are questions involving the general welfare of the whole people, and therefore of wide and general interest. Production has steadily increased, but consumption has increased faster; prices during the past decade have ruled higher than ever before in times of peace. Conditions create prices, and conditions are constantly changing. The people have much to do with creating conditions and therefore much to do with influencing values.

The estimate of the U. S. Government of November 10 of this year's production of the principal cereals is:—Of wheat, 681,769,000 bus.; of corn, 3,121,381,000 bus.; of oats, 1,096,396,000 bus., and of barley, rye, buckwheat and flaxseed an amount sufficient to make a total of 5,131,846,000 bus. Of the total of the world's production this is one-fifth of the wheat, half of the corn, and a third of the oats.

It may then be easily understood why the American crop is so closely watched by nearly all the world. Adam Smith, in his "Wealth of Nations," which came off the press in 1776 and at once became an authority and has since remained so, says: "If a man goes to market with ten sacks of grain and finds buyers for but nine sacks, the sale of the tenth sack fixes the price of the entire ten." If he goes to market with nine sacks and finds buyers for ten sacks, he fixes the price. Hence the world is constantly watching to know, if it may, whether the market will have a little surplus or a little deficiency—whether it will have ten sacks or nine. The surpluseage not required on the farm and entering the channels of commerce varies somewhat from year to year, depending largely on the size of the crop, the quantity fed and otherwise used in the locality where produced. Whatever the quantity may be, it is always a most important item, indeed the chief one, in the business of the country. This total production of grain—and grain means in a certain sense, hogs and cattle as well—is so great as to be almost impossible of comprehension, so stupendous are the figures. It stands as the unquestioned testimony of the intelligent toil and industry of that great bulwark of the material well-being of the American people, the American farmer. But well as he has wrought, and very great as are the results of his toil, he yet may, if he will, through intelligent and proper conservation and improvement of the soil and resources of the land and by the use of improved seed, materially increase, if not in many cases double, the total volume of present crops.

Grain exchanges and boards of trade came into existence, as all public service agencies have, to supply a common need. Not very long ago in the history of our country, each community produced for itself about what it needed. Presently cities and towns began to grow, and the production locally was unequal to the demand, and new sources of supply had to be found. At the same time the Western prairies were rapidly being turned into farms, and they produced far in excess of local requirements. The public need thus arose of means of distributing from the farms the produce required by the centers of population. The railroad was in consequence built. Those wanting to sell and those wanting to buy had need of a common meeting place, and the exchange, in obedience to a common necessity, was created. In a large sense the exchanges are market places as truly so as are the public squares or other places where farmers meet buyers in every town in the land. In the year 1848 the Chicago Board of Trade was organized. Its sagacious founders expressed in a masterly way its objects in the following language: "To maintain a commercial exchange; to promote uniformity in the customs and usages of merchants; to inculcate the principles of justice and equity in trade; to facili-

tate the speedy adjustment of business disputes; to acquire and disseminate valuable and economic information; and generally to secure to its members the benefits of co-operation the furtherance of their legitimate pursuits."

The exchanges provide for the impartial enjoyment of business facilities; for the securing of all obtainable information concerning the crops of our own and all foreign competing or purchasing countries and of existing stocks at home and abroad; and of the world's needs and the world's possible supply from every source. The Chicago Board of Trade spends many thousands of dollars yearly in procuring every variety of information which may or is likely to affect home values, not for the benefit of the few but of the many—for the buyer and seller, the producer and consumer alike; and it is instantly furnished to the public free of cost.

In the earlier history of the exchanges the members carried on a general commission business; but as the business grew and it became possible to specialize in the various departments, these departments became more clearly defined, with the result that the business is now divided into four principal classes: (1) the receiving merchants get the grain from the country and sell it—this is usually the initial appearance of the grain in any market; (2) the elevator interest who stores the grain; (3) the shipping merchants, who distribute it for consumption, and (4) the speculative and future-delivery merchants, through whom are made hedging sales against the grain in public elevators in the terminal markets or stored in country elevators or elsewhere.

The receiving merchants are prolific of market information of all kinds, forwarded to country dealers in daily letters, and to a large extent make postal card bids for car lots of grain. The country dealer being in receipt of all current information, commented upon by each writer from his particular view point, and having car-lot bids from competing markets, is in a position to act intelligently as to the highest prices he may pay the farmer. Knowing that his competitors will outbid him if they can, he pays the highest prices his best market will admit of; and by accepting track bids he eliminates a good share of the risks of the business, if he prefers to conduct it in that way.

It will be noted that the exchanges make possible this modern method, the result of which is the handling the grain on a much smaller margin of profit than would be required if the risks incidental to prolonged ownership and to old-time methods continued. In the end, the farmer gets the benefit; for any saving at any point in the handling of produce is added to the price originally paid for it.

The elevator interest performs an important service in the distribution of grain. Without adequate storage facilities, the excess of receipts over shipments would go a-begging. In those countries where these facilities are not possessed, such as in the Argentine Republic and in parts of Russia, much grain has been lost through exposure to the elements, even after it had reached market centers.

Chicago possesses abundant storage, the maximum of public and private elevator capacity being approximately 100 million bushels. This storage provides for the accumulation in times of surplus of supplies against periods of small receipts. This business has the honor of great age; for it is related in the sacred Book that Joseph stored wheat in Egypt in times of plenty against seasons of famine 4,000 years ago. I recall when Chicago sent millions of wheat, some of which then was four years old, to feed the starving millions of India.

The shipping merchants are the chief distributors of products from the terminal markets. Not only are round lots sold for domestic and foreign shipment, but single cars, amounting in the aggregate to an equally large volume, are supplied to every buyer in the Eastern and Southern States. These smaller dealers can, even within an hour of the closing of the Chicago Board of Trade, get the cost for delivery at his station of any of the commodities dealt in on 'Change. Direct offers by wire, or through local selling agents, are easily and almost instantly obtainable. But for the activity of the members of the exchanges in the dissemination of market values by these trade offers, much of the buying and selling would be but groping in the dark.

The exchanges are looked to almost alone, by the public, for reliable information determining grain values. They more than any other agency maintain that great incentive to commerce and trade, competition, resulting in the payment to the farmer—may sound, likewise the lowest possible price to the consumer. Competition cuts and lowers the profits of middlemen, as well as is the life of trade. It may be confidently asserted by Board of Trade members that this speedy transmission of trade offers over such a wide area, having almost an universally beneficial effect, is their own achievement and enterprise.

As a prime necessity in fixing values of grain is the classification of it into grades. In the year 1858, fifty-two years ago, for the first time in this or in any land, the practice of grading grain was



inaugurated by the Chicago Board of Trade. For thirteen years inspection was administered by the Board, but in the year 1871 the present Illinois railroad and warehouse law was enacted, since which time the state has performed the service. The chairman of the allied chambers of Great Britain a few years ago remarked that of all the achievements of human ingenuity in the grain trade, this is the greatest. It facilitates business in a large degree. By grade transactions may be quickly accomplished by telegraph and cable. The grade represents the quality, leaving only the price to be adjusted. To revert to the old-time sample method would be to consume days, even weeks, in consummating trades.

Of hardly less importance is the Department of Weighing and Supervision, organized and perfected for the mutual protection of the shipper and the receiver of grain consignments. The good offices of this department are extended without partiality to all having an interest in the grain trade. It notes the condition of the cars, checks the accuracy of the scales, prevents waste at unloading, and co-operates with all handlers of grain at elevator points in all possible ways to the advantage alike of buyer and seller.

The handling of the products of the farm from the grower to the terminal market and thence to the consumer, as I have outlined it, is fairly well understood in a general way; and I will not longer dwell upon the details of this important feature of their distribution. Constant effort is being made to improve methods which shall meet the requirements of changing conditions. Any system, however complete and perfect, is obliged to change frequently under changing conditions. The transaction of business of great volume is ordinarily accompanied with some minor errors, but in the main the service of the commercial exchanges rendered to the public is a great one—indeed, is a prime necessity and could not be dispensed with.

That every act of each individual member is always above criticism could not be expected; yet the exchanges maintain a high standard of commercial ethics, and unfair or dishonest practices by members is surely and swiftly punished. With the growth of cities and with the increased production of the farms and ranches, long distances exist between the source of supply and the consumer. This fact required new agencies to perform the service of distribution; and individuals, firms and corporations, as a result, compete for the trade thus established. Before this development, under early conditions, business was a matter of man dealing with man face to face, and each had a full opportunity to protect his rights—each could look out for himself. Modern conditions require the service of public agencies; and the new idea relative to the moral obligations of public service agencies is, that they shall, in rendering such service, be satisfied with one fair and reasonable profit, and that then they shall become trustees and protect the rights of the people. This has been popularly called "the square deal." Not to do it has been termed "predatory wealth preying on the people." Because of this doctrine we have witnessed numerous attempts at so-called reform legislation, with some enactments of law, with indictments and heavy fines for its violation, as in maintaining agreements or trusts in restraint of trade.

This is another question than the one I have been asked to discuss at this time; but notwithstanding boards of trade do not engage in business on their own account, all transactions being by their members for their own account, their prime function being, as I have already said, to bring buyer and seller together, the public seems to regard them, as a unit, responsible for all the acts of their members, and appears also to think it has the same right to enact laws for their control that it has for the control of corporate agencies who actually are engaged in performing a service to the public for a compensation.

I have said this to indicate the attitude of some members of the public towards boards of trade, because of their having become so large a factor in the distribution of farm products to consumers. Most of the criticism of the exchanges relates to the business of buying and selling for future delivery. This feature of the exchange is so vitally related to the distribution of grain and provisions, and is so impossible of elimination from it, that a brief discussion of its need and great value, as well as its abuse, is essential to even a superficial understanding of all the functions of a grain exchange.

The modern exchange, in the beginning, made provision only for the cash business; that is, for the immediate delivery, for cash. For a time this method sufficed for the wants of the trade; but as the farms multiplied and the cities grew, and as the milling of wheat, the cribbing of corn, the packing of pork, and other interests expanded and increased, the scope of the trade widened and the trade itself became more complex, and a broader market was required. Rapidly growing business required that contracts be made for future delivery. The advantage of such forward trading to all concerned was so plain that the exchanges made the needful provision for such transactions. These contracts,

made under the rules of the exchange, are enforceable under those rules and in the courts of law.

From its beginning there has been misapprehension about trading for future delivery. No part of the business of the exchange is so little understood as this. But the farmer does not graduate his marketings to just the needs of the consumer; indeed, that would be impossible. He sells when it suits his pleasure to do so. Thus receipts at terminal markets at times are enormously in excess of all requirements. For example, during August of this year, for several successive days, the receipts of oats were a million bushels per day and more, being enormously in excess of daily needs. Without hedging sales for future delivery this vast quantity could not have been marketed except at great sacrifice to the country dealer. Hedging contracts are those made for purpose of eliminating risk; in other words, for the purpose of insuring the holding of the grain without loss. If a crib of corn, say of 10,000 bushels, is bought and held without a sale of it for future delivery, it becomes a speculative transaction. As some one must own the product of the farms from the time the crop is harvested until it is consumed, and as the value of it fluctuates almost daily, it becomes evident that whoever owns it becomes a speculator. Whether we like it or not, and call it by what name we choose, the element of risk is there and can not be eliminated. It follows necessarily that the buyer of every hedge becomes a speculator; therefore the need of this distinct class to assume this element of risk which is present in varying degree in all commerce. Even the farmer, in a sense, speculates when he risks the value of the use of his land, of the cost of his seed, and the value of his labor, knowing well that the drought of summer or the frosts of early fall, may place all at naught. To eliminate risk would be to produce stagnation; for if even the farmer declined to take the risks of his crop, he would cease to produce the necessities of life.

The speculator is a necessity not commonly recognized; to the contrary, more generally he is held as not serving any useful purpose. The abuse of speculation by those not qualified to engage in it has brought the exchanges into more or less disrepute. It is the perversion of a useful thing by an incompetent individual. The fault lies with the individual, not with the exchange. Many engage in it who should not. Mr. Justice Holmes of the U. S. Supreme Court defines it well in a Board of Trade case before that high tribunal. He says:

"People will endeavor to forecast the future and to make agreements according to their prophecy. Speculation of this kind by competent men is the self-adjustment of society to the probable. Its value is well known as a means of avoiding or mitigating catastrophes, equalizing prices and providing for periods of want. It is true that the success of the strong induces imitation by the weak, and that incompetent persons bring themselves to ruin by speculating in their turn. But legislatures and courts generally have recognized that the natural evolutions of a complex society are to be touched with a very cautious hand, and that such coarse attempts at a remedy for the waste incidental to every social function as a simple prohibition and laws to stop its being are harmful and vain."

"Speculation is the struggle of well-equipped intelligence with the blind power of chance." I have sometimes stated it in simpler language by saying, "speculation is based on calculation; gambling is based on blind chance." The man who carefully calculates from all known conditions the value of any farm product, considering all influences which affect its price, and then buys, as he would buy land or property of any kind, is rightly called a speculator and renders a service in helping to carry the surplus quantities from time of production to time of need. On the contrary, the man who blindly "takes a flyer" "just for luck," or invests in any commodity without a well-defined conception of its value, thereby depending on blind chance, is truly a gambler. He usually suffers loss and invites criticism of the exchanges; as well blame a good implement because of an incompetent man's not knowing how to use it. No one seeks to justify or defend this type of speculation.

Any attempt of speculators to manipulate prices on 'Change cannot and does not nullify the law of supply and demand. It may suspend it locally for a time but usually with disastrous results to those who attempt it. The entire list of successful corners on the Chicago Board of Trade during its sixty-two years of existence can be counted on the fingers of one hand. Objectionable as corners are, they usually serve to secure temporarily higher prices for the farmer. The law of supply and demand is supreme. The speculator who governs his action in accordance with it reaps a profit; he who ignores it suffers loss.

It must be borne in mind that what we term "speculation" is not possible with all products. We meet with it only in those commodities produced in large quantities, for which there is a world demand, and such as are not susceptible to deterioration, when properly cared for, by holding them in store.

Commodities of this nature accumulate rapidly when harvest is over, and the carrying of them devolves on some one; thus they become subject to investment-buying or speculation. Did it ever occur to you that with the exception of potatoes, which are perishable, and hay which is of great bulk, and therefore do not lend themselves to speculative trading in a general way,—the only important agricultural products, the price of which is not controlled by a trust—are those dealt in for future delivery on the exchanges? The U. S. Government has now under indictment certain prominent men for maintaining a beef trust. These same men are large packers of hog products; yet nobody has ever heard it claimed that there is a trust in hog products. These products are heavily traded in for future delivery, thus placing them secure against trust control.

Judge Grosscup, of the U. S. Federal Court, in giving a decision in a case relating to the legitimate boards of trade, said: "They balance like the governor of an engine the otherwise erratic course of prices. They focus intelligence from all lands and the prospects for the whole year by bringing together minds trained to weigh such intelligence and to forecast the prospects. They tend to steady the markets more nearly to their right level than if left to chance unhindered manipulation."

President Hadley of Yale University, says: "If the speculator foresees a rise, he buys wheat today with the hope of selling at an advantage. If he foresees a fall, he contracts to make future delivery at today's prices in the hope that he can secure the means of filling those contracts at rates low enough to leave him a profit. This is the type of transactions which forms the bulk of the business on all leading exchanges of the world. When such speculation anticipates an actual demand, it is of great service to the community. If we compare the prices of the present day with those prior to the development of speculative activity, we find that the margin between the amounts paid to producers and those charged to consumers is much narrower than it was before. Part of this difference is due to cheaper transportation, but a part is due to the action of the speculators in minimizing the effect of variations in production upon prices paid the producer. This is the effect of legitimate speculation—anticipating movements of supply and demand and taking fair risks. The difference between legitimate speculation and gambling lies neither in the subject-matter nor in the form of the transaction but in its intent and purpose. Legitimate speculation involves anticipation of the needs of the market and a power to assume risks in making contracts to meet those risks."

That the increment of the undesirable, which is found in every field of human activity or endeavor, in a greater or less degree, is often recognizable in speculation is a matter of common regret. But its presence is no greater in proportion to the volume of business incidental to our large production than is natural or is found in other lines of business. Its value in the commercial distribution of farm products has perhaps never been better or more authoritatively stated than in the report to Congress by an Industrial Commission appointed some years ago to investigate boards of trade by the Government at Washington. This Commission consisted of five United States Senators, five Congressmen and ten private citizens. It consumed two years in its investigations, spending about ten days of that time at the Chicago Board of Trade. It closed its report relating to exchanges with the following:

"1. They localize industrial risks among a commercial class whose special function is to distribute surplus supplies over deficit times and places in such a way as to lessen the uncertainty of producers and consumers.

"2. They relieve producers and consumers from carrying a whole year's stock, enabling the farmer to convert his crop promptly into cash capital and the latter to supply himself as his periodical needs may require without enhancing prices beyond the original rate of risks of returns of such capital investments.

"3. Competition of speculative traders tends more than any other force to reduce profits of these agencies to a minimum per unit of commodity handled. Released from their economic functions, it is their interest to seek to reduce the risks of distribution to a minimum. By expert acquaintance with the conditions that involve risks, the hazardous elements are gradually limited, if not entirely eliminated."

Prof. P. G. Holden of Ames, was next introduced. The subject of Prof. Holden's address was "The Improvement of the Corn Crop." He said, however, that as the hall was demanded for the evening program, he would be obliged to postpone his address until then; and the meeting was declared adjourned.

#### EVENING SESSION AND BANQUET.

The banquet was prepared and served in the Coliseum at 6 p. m., by the ladies of the Domestic



Science Department of Iowa College. Included in the menu were corn soup, corn candy, Johnnycake, roast beef (corn fed), fried hominy, succotash, corn oysters, corn punch, corn salad, Indian Meal pudding, cereal coffee with corn sugar, and pop corn crisp. That all the corn and allied dishes were delicious is stating the proposition in far too unenthusiastic a manner. There were Oliver Twistian cries for "more" heard on all sides, and the feast of corn prepared by the ladies was a fitting precursor of the feast in honor of King Corn which followed.

J. L. McCaull, in assuming his duties as toastmaster, said that they were met together on common ground—that of intense interest in intense agriculture. We need fear no evil so long as we rightly and thoroughly cultivate our soil, have good schools, live in the fear of God, and have respect for our neighbor and respect for our own industry. The day for the agitator and the demagogue has passed. The railroads of today, by their good seed specials, have paid back 100 to 1 for all the watered stock they formerly put out upon the public. They have done more than any other one influence, except the agricultural colleges, to promote the interests of the people of the state.

E. T. Meredith, chairman of the agricultural committee of the Des Moines Commercial Club, made a cordial address of welcome, in which, besides referring to the many things which went to make Des Moines a great city, he said they were also interested in agriculture. We are going to ask the state legislature for \$100,000 to devote to extension school work. It would be money well expended, and we ask you to co-operate with us to help forward the work.

M. W. Cochrane, president of the St. Louis Merchants' Exchange, responded to the address of welcome. He said he was surprised at the wonderful exhibit made in the Eighth Annual Corn Exhibition. Iowa farmers had made an excellent start in the right direction. He thought that the state should be more liberal with its agricultural college and hoped Iowans would get an appropriation to meet the college needs.

M. M. McFarlin also responded to the welcome made, and reviewed the first years of the good seed specials which, he said, had resulted in incalculable benefit to the farmers of the state.

Prof. P. G. Holden, of Ames, called attention to the great work done by the railroads and the Western Grain Dealers' Association. The railroads came to me a few years ago, he said, and asked me how they could procure better seed. I replied, I do not know any way unless you pay for it. So they sent me to buy seed corn, which I did, and roads brought the two carloads which I had purchased in free and it was distributed to farmers. Some of the best corn that you have seen at the exhibit is the result of that selected seed corn.

E. W. Stanton, president of the State College at Ames, spoke upon "Mechanic Arts." Prof. Stanton said that the agricultural college, and the interests represented at this gathering, should touch elbows in the most friendly way. The school at Ames is not a University, and has never sought to become one. It has devoted itself hand and heart to industrial education and stands unique in its adherence to its one purpose. No one can overestimate the value of the experiment stations. We need in our state to breed better cattle, raise better corn and see to it that our soil is enriched rather than impoverished.

Henry Wallace, editor "Wallace's Farmer," Des Moines, said the average farmer is too prodigal of the soil. He complained about the price of lumber, due to prodigality in the use of the forests by the lumber barons, but the farmers themselves were the greatest of squanderers of nature's gifts—up to a few years ago. The production of grain had constantly decreased in all parts of the United States, in spite of the fact that virgin soil was broken up each year. This waste, or poor farming, as it may be called, has given world-wide offense. We have not been farming but skimming the soil as soil robbers; we are just beginning to find out the pos-

sibilities in our Iowa and Nebraska and western soil.

Prof. Chas. F. Curtiss, dean of Ames College, spoke upon the work of the experiment stations. There are over 12,000 men engaged in experimental work throughout the country and more money is needed to carry on the work.

At this juncture the Toast Master was required to leave the banquet hall to catch a train and Geo. A. Wells assumed his role. He called upon Arthur Reynolds, President of the Des Moines National State Bank. "I was once a grain dealer with my father. In those days the products of the poor farmer and the good farmer were bought at the same price. We could not get a carload of straight white corn or yellow corn in Iowa. I have come to the conclusion that the farmers will have to use banking methods in their business and systematize it. The states of Maine and Massachusetts raise more corn per acre than the states of the Mississippi Valley. More production means more deposits and more banks. So far as the financial situation is concerned, we have been on the verge of a panic, but the great crops of this year have eased the general situation. From now on there will be a close money market until the farmer is willing to let go of his stuff. We are headed toward a landed aristocracy in this country unless we can induce the people to return to the farm."

Capt. J. F. Merry was next called upon. He represented the Illinois Central Railway. "I took Professor Holden into Mississippi and Louisiana and he set the white boys in that section to work raising corn. This year 10,000 boys in over fifty counties were engaged in growing corn. Thirty years ago I carried two train loads of immigrants into Plymouth County, Ia. They bought land at \$15 per acre and put in wheat. Today it is worth from \$100 to \$200 per acre."

Harvey Ingham, editor of the "Register and Leader" of Des Moines, made a very interesting talk, in fact, one of the most thoughtful speeches of the evening. He emphasized the need of meeting each other face to face. He said: "These meetings remind me of an old-fashioned walk-around, which we used to have at college to introduce the freshmen into the college life. Let us dedicate ourselves to the American experiment of practicing a square deal,—of giving every man a fair show. There is a community of interests between all the people of this country and it should be cultivated."

Professor W. E. Taylor of Moline, Ill., was the last speaker and owing to the lateness of the hour, paid a glowing tribute to Professor Holden and then closed. He said, "if each ear of corn could be increased one ounce in weight in Iowa, it would mean 17,200,000 bus. more corn."

There were several other speakers on the program, but as it was after 11 o'clock, Toast Master Wells dismissed a very successful meeting.

#### SOME MINOR HAPPENINGS.

W. E. Krizer of Eddyville won first prize for the best thirty ears of corn grown in the state.

Wheat sweepstakes for north and north central Iowa were won by J. R. Drewelow of New Hampton. John Justice of Ankeny, won the wheat sweepstakes of the south central section with a sample of red winter.

Henry Naylor of Clear Lake won the corn sweepstakes in the amateur class for the best ten ears in the north section.

Francis Bengstrom of Essex won the grand champion sweepstakes for the best ten ears of corn shown in the junior class.

Orville McClelland of Adelphi won the grand champion sweepstakes for the best ten ears of corn shown in the amateur class.

Fred McCulloch of Hartwick, vice president of the Corn Growers' association, won the sweepstakes for oats in the central section.

Frank L. Moore of Sargeant Bluffs won the prize for the best ear of corn in the state and the grand champion sweepstakes for the single ear exhibit.

Ludwig Bengston of Essex won the grand champion sweepstakes for wheat for the entire state. His sample was of the spring variety and the judges

said that it was probably the finest ever exhibited in Iowa. This is the first time that spring wheat has ever won the grand championship of Iowa.

To C. R. Bishop of Altoona was awarded the honor of having raised the best ten ears of corn in the state, the ten ears will be exhibited at the National show at Columbus in January-February. Mr. Bishop also won the prize for the grand champion sweepstakes for the best bushel of corn exhibited at the show.

#### TERMINAL MARKET REPRESENTATIVES.

Terminal markets were represented as follows: Minneapolis—J. L. McCaull.

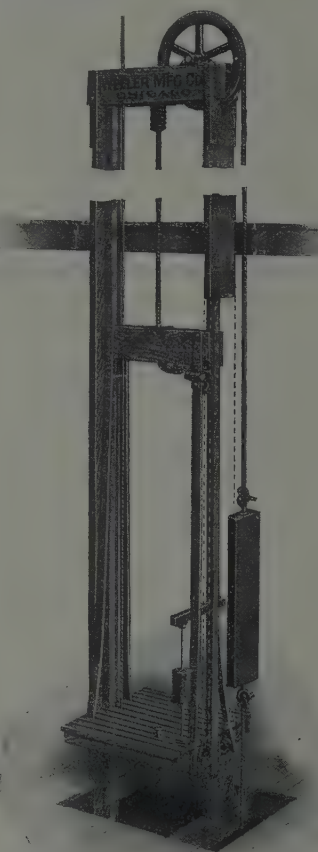
Omaha—G. A. Roberts, S. S. Carlisle, E. A. Cope. Kansas City—Wm. Murphy, A. L. Ernst, O. A. Severance, W. Ferguson, W. W. Simmons, E. R. Shipp.

St. Louis.—Bert Ball, C. L. Wright, Erie Picker, M. W. Cochrane, John O. Ballard, Geo. F. Powell, H. I. Ketchum, Edw. Greve, Jas. Parrott, Geo. C. Martin, Jr.

Chicago.—H. A. Rumsey, Wm. N. Eckhardt, Frank G. Coe, L. F. Gates, M. L. Vehon, P. H. Shiffin, J. C. F. Merrill, Robt. Lipsey, J. C. Murray, H. A. Foss, O. A. Cool, E. H. Young, W. E. Justice, Geo. L. Green, Geo. A. Wegener, Harry Rogers, Geo. Fuller, G. S. Hutchison, W. F. Andrews; and the trade press representatives.

#### WELLER IMPROVED MANLIFT.

The lift shown herewith is one of the latest of the "Weller-Made Line." It is the result of years



WELLER IMPROVED MAN LIFT.

of experience and of careful investigation and tests, the object being to turn out a man-lift of medium price without jeopardizing thoroughness in construction and quality, it being fully realized that these two points should not be lost sight of in making an article of this kind. Only the best quality of oak and maple is used throughout its construction. It is solidly braced and with a substantial head.

A number of new features have been added, among which might be mentioned the following: Improvement in the brake grip. The brake used in the Weller Man-Lift is positive, easy to operate, and is conveniently located. It will be observed that in place of the old style of wagon spring, a new improved coil spring is used for the bumper at the head. In addition to the large weight being im-



proved, new small and convenient weights for adjusting balance have been added, and are so placed at the side of the elevator, that they can be grasped without the operator turning around. This is also true of the hand rope. A new safety device absolutely prevents the car from falling when the rope is broken. This device has been tested to a six hundred pounds' capacity. Soft cotton rope for hand pull is furnished. If desired, wire rope can be can furnished in place of the manila lift rope, which is regularly furnished, at a trifle additional cost.

The manufacturers, the Weller Manufacturing Co. of Chicago, will furnish any further detailed information desired on request.

[For the "American Elevator and Grain Trade."]  
**A THREATENED DANGER TO THE COM-  
ING WHEAT CROP OF THE  
MIDDLE WEST.**

BY P. S. GOODMAN.

No sooner have we sown the wheat than we begin to speculate upon the probable crop; and are more susceptible to the influences that work for injury than those that work for betterment—largely the effect of crop results under the maximum. Two dangers threaten the late sowings as we enter this winter season. Over the western end of the belt, and extending southward, a drouthy soil calls up visions of disaster. In the central section and trending eastward, that ancient pest—Hessian fly—has made its appearance in unusual numbers and over an unusually extended area. The first unfavorable condition, while it engages the attention of the trading markets, may be removed any time within the next four months by rainfall; the second, and which is least regarded at the trading centers, can not be overcome by weather or the efforts of man; and multiplied damage is in store for the wheat fields if—and the probability rests upon the extent to which the heavy infestation noticeable late in the fall has been itself infested with the still more minute parasites that prey upon the *Mayetiola Destructor*, the ponderous name which the bugologists have bestowed upon our Hessian enemy.

I almost feel like apologizing for taking up the subject of Hessian fly in the wheat, for have we not every season been told of the depredations of the pest, and the crops have come out all right? Knowing that most of the gossip that filters into the markets, when prices are being fought savagely, have truth for one-third and imagination for the other two parts, I almost hesitate to call attention to what thus far appears a menace to the wheat crop of Illinois, Indiana and Ohio.

It has been eleven years since the fly took heavy toll from the fields in the Ohio Valley, and since then there has been but one important infestation. In 1908 the fly appeared in damaging numbers in the south central part of Kansas and the north central counties of Oklahoma. It took a terrific toll out of the counties of Kay and Grant in Oklahoma; and in Sumner, Crowley, Harper, Harvey, Kingman, Reno, Rice and McPherson Counties in Kansas, the damage running from 20 to 50 per cent.

Insect depredators are held in check or unleashed by the weather conditions; the outbreaks follow specially favorable periods for their multiplication. The hungry hopper develops with dry weather; the army worm with an unusually early spring that permits an extra generation; the green bug multiplies with an open, wet winter. The Hessian fly is stimulated to marvelous fecundity by early fall rains, followed by dry weather.

Such we had this season. Of course, the fly's propagation was helped along by an early sowing of wheat; the hay was short, winter pasturage is helpful, and the provident farmer early prepared his seed bed and thereby spread before the pestiferous little pest of the wheat lands a perfect nursery for its young.

The Hessian fly is one of the minutest of the winged creatures, and one of the most prolific. Barely a tenth of an inch long in body, the female 100 to 150 eggs. Guided by the instinct of race

100 to 150 eggs. Guided by the instinct of race preservation she rarely deposits more eggs to a plant than the plant can nurture and develop. When she is aided by a delightful, warm, dry fall, her prodigy will equal her efforts. This industrious female flits from blade to blade, and when a field is well covered she takes wing to other fields, for her instinct enables her to differentiate between the moderate growth of the fall plant, and the continuous growth of the plant in the spring. She is a migrant in the fall, but in the spring she seldom leaves the field that reared her.

The destructiveness of the fly is measured by the activity of the fall; for, once housed for the winter on the crown of the wheat plant, the blades may yellow and brown and the tender plant die, but Mr. or Mrs. Fly is safe from the winter blast, and, if not made the host of a parasite, will emerge with the spring, and repeat its generation as many fold as in the fall. We may measure the probable damage to a field by multiplying the apparent damage of the fall ten times. We can arrive at the fall's damage during the winter months, when the ice and snow is off the plant, by noting the dead spots in the rows. Pick up a cluster of the dead wheat, and shake the crown of the stalk in your hand, the fly in his winter covering, like a flax seed, will fall out. If the plant is stocky and tough it will only yield up the flax seed by tearing apart the clustered crown.

Sometimes the larva—the maggot—persists through the winter; for the fly will continue to lay eggs long after the frosts have come, if she happens to be late in emerging, and these larvae have been known to remain in the soft stage all winter. Most of the reports this year indicate that the pest was out early, and safely housed before the winter. It is the larva, the maggot, that the farmer is best ac-



THE HESSIAN FLY.  
1—Male, natural size and magnified; 2—Female, natural size and magnified; 3—Larva, magnified; 4 and 5—Pupa, magnified; 5—Larva, lateral view.—After Forbes.

quainted with, and the flax seed, or pupa, is familiar to the field observers. The fly itself is so insignificant that only the studious and the alert know it by sight.

I remember standing in a field in Southern Kansas with a gentleman early in the spring of 1908. As we looked at the luxuriant growth of wheat, covering the earth with its bright green mantle, he said to me, "This is the field we went over last January, and you predicted that it would never be harvested. Honest, now, ain't you ashamed of yourself?"

"I am now satisfied that I made a good prediction," I rejoined; "for I have never seen so many flies in a field before."

"Flies? flies? Where are they?" and he looked curiously from me to the field. "I don't see anything but these little mosquitoes."

Picking up a blade on which were several of the flies I had him look at them through my pocket magnifier. "Aside from the fact that mosquitoes do not come to Kansas quite this early, would you say they had a mosquito's bill?" I queried.

He looked with a puzzled expression on his face, then came a strong expression for a deacon. "Say, keep this quiet," he said, "we fellows out here have been looking for something as big as a house fly!"

He had also had the idea that the flax seed case of the pupa, wherein the fly makes his change according to the habits of all the tribe of flies, from

maggott to winged creature, was an egg to be hatched out.

Despite the presence of the pest since colonial days, the unfamiliarity of the average person as to its characteristics, habits, methods is astonishing. The eggs are tiny things, laid in a row from four to eight on the minute ribs of the upper side of the leaf, or on the early plant, and a dozen of them barely make a quarter of an inch line, only a practiced eye can detect them. When hatched, in the course of a few days, the maggot works its way down to the bottom of the leaf, buries in the sheath, eats until he is big enough for the transformation, then turns right about and his silvery, greenish skin takes on a coat of tan, and in a few days it looks like a flaxseed. If it happens to be the spring brood, the tender plant grows past his obstructing presence, leaving it imbedded on the side of the stem, where it maintains a "strangle hold," until the stem drops with its half-filled head of grain; this is the most serious phase of the fly's depredations, though oft times the spring brood of maggots is so numerous that the plants are killed before they are out of the boot. I have seen fields that gave promise of a good crop until two weeks before harvest, and then the strangled stems toppled over until the field looked as if it had been trampled by a herd of calves.

The reports of the fly in great number come this year from all over Indiana, central and southern Illinois, western Ohio and well to the eastern limits of the heavy wheat counties, southern Michigan and eastern and central Missouri. Scattering areas in Maryland, Iowa and Nebraska report its presence. The character of the reports from the Illinois-Indiana and Ohio sections indicate a serious condition and cause much apprehension for the coming spring. Illinois was badly hurt by the fly last year, the damaged section running through the state, with especially heavy infestation through the Mississippi River counties. Prof. Forbes, state entomologist, estimates the damage as high as \$600,000 in one county alone. The state report, compiled by Secretary Dickerson, shows heavy declines in yield in the counties of Pike, Greene, St. Clair, Washington, Randolph, Effingham, Adams, and several other important wheat sections, where fly was reported working early in the past season.

Probably the most extensive damage that was worked by the fly was in the crop of 1900 in the states of Ohio, Michigan, Indiana and Illinois. The previous fall (1899) was somewhat similar to the one just passed: Early rains, and a very dry season through the winter with continued moisture deficiency until spring; which in turn was late. The drouth and late spring were credited with much of the damage, but had the plants not been infested with fly in the fall, there might have been another ending, Illinois, which had the least complaint, rounding out the harvest with twice the yield per acre of Ohio and Indiana. The complaints in the fall of 1899 were of the same general character as have been received this season. The December crop report of the government gave the following:

	Acres.	Condition.	Crop promise.
Ohio .....	2,582,000	83	41,000,000
Indiana .....	2,688,000	85	40,000,000
Illinois .....	1,797,000	100	31,000,000
Michigan .....	1,587,000	74	24,000,000

Total ..... 8,654,000 85 136,000,000

The crop promise above given is estimated on the average production of each state, the Government never converting its percentages into crop valuations. Despite the dry weather and the fly complaints the average condition was fair. When the May report, with abandoned acreage, was announced, the slump in these states was terrifying. The figures are a sufficient commentary:

	Acres.	Loss.	Con- dition.	Crop. promise.
Ohio .....	1,614,000	968,000	59	18,000,000
Indiana ...	1,081,000	1,607,000	44	8,000,000
Illinois ...	1,660,000	137,000	86	25,000,000
Michigan ...	1,130,000	357,000	65	15,000,000

Total ... 5,585,000 3,069,000 66 68,000,000

The flies had created great havoc in the fall; the spring brood was barely at work when the report



was made in May, and the acreage in these four states was reduced 36 per cent, the condition lowered 19 per cent, the crop promise cut in half. The final report of the crop uncovered greater damage, though the acreage in Indiana was found to have been less abandoned than estimated on May 1. The final report pathetically presents the damage wrought by fly and drouth; and if we accept the sinister role of the drouth at half the total the half that may be charged to the pest is impressive enough:

	Acres		Yield.	Crop.
	Harvested.	Abandoned.		
Ohio .....	1,421,000	1,161,000	6.0	8,524,000
Indiana ...	1,210,000	1,478,000	5.3	6,412,000
Illinois ...	1,383,000	414,000	13.0	17,982,000
Michigan ..	1,220,000	367,000	7.6	9,272,000
Total ...	5,223,000	3,431,000	7.9	41,190,000

From the May promise to harvest there was a further net loss of 25,000,000 bushels from the crop promise, a net abandonment of 362,000 acres more. The actual crop was but 30 per cent of the promise. Just slightly over one-fourth of the normal crop that these four states should have raised on the initial acreage. Indiana, on 45 per cent of her initial acreage, harvested only a third of her average yield per acre; one-eighth of a crop possibly was her harvest after the devastating fly had swept through her fields. Ohio's harvest was one-sixth of a normal crop on the area seeded; Illinois reaped a little above half a crop; and Michigan slightly over one-fourth.

Fly, drouth and a late spring worked this great havoc—these three combined; but the fly was nursed in an ideal cradle in the fall of 1899, and his ravages in a normal spring season would have equaled the damage by cold weather. The limitations upon the threatened danger to the coming crop is the extent to which the natural enemies of the fly have made of the flaxseed a cradle for their young, for like the "fleas that have other fleas to bite 'em," the Hessian fly larva is the repository of the eggs of other tiny insects. Man can check the pest by late sowing, but crop rotation will minimize the danger at all times. The conclusion of the fall's general complaint of great infestation will be followed with more than usual interest as the plague comes, when wheat growing in this section has again been assuming large proportions.

### "NEW CORN—PERISHABLE."

All shipments of new corn, on account of being liable to spoil if delayed en route, should be carded and way-billed "NEW CORN—PERISHABLE," to insure the cars being handled promptly.

Most railroad companies have arranged to move this commodity under what is known as the "Red Ticket" over their rails, thus insuring the best possible service on such shipments.

It is advisable for you to place a description of your property on your shipping orders; in order that the contents of the cars can be readily distinguished and given fast movement.—Harry W. Kress' "White Letter."

Milwaukee's first car of new corn was graded No. 4. It was handled by W. M. Bell & Co.

"Never before, in my time, has England been an exporter of wheat to France, on anything like the scale that has occurred since the end of harvest," says the European correspondent of the Country Gentleman. "Cargo after cargo has been loaded at our east coast ports, and despatched to Havre and other centers of distribution. Delivered, be it noted, in the face of the heavy tariff wall that exists." Potatoes are also going from England to France in bulk—"in one case," says the same writer, "a dealer has contracted to deliver 5,000 tons from the Lincolnshire coast, and plenty more to follow. I regret to say that the retail price in Paris is twice what it is in London." Other common things, such as coal, find their way across in increasing quantities, the price of that article (coal) to the consumer running from \$12.50 to \$15 per ton. You are not to be surprised should further rioting be reported both from the French and German capitals."

### A MODERN KENTUCKY ELEVATOR.

One of the most complete and convenient, as well as best built elevators in Kentucky, is the new house of George Keller at Newport. It was built for Mr. Keller by H. C. Teeter of Hagerstown, Ind., who also made the plans and supplied the equipment.

The size of the entire building shown in the picture is 60x96 feet on the foundations. The cribbed elevator is 36 feet square, with a basement 12x24 feet in size and a first floor open space of 12x25 feet. The cribbed bins are built of 6-in. stuff for twelve feet and 4-in. stuff for the next 13 feet. Eight rods are used to each bin. It is ten feet from the top of the cribs to the texas floor and fourteen feet from the texas floor to the plate, the texas being 12x36 feet in size.

The house is equipped with the following machinery: 35-horsepower Hamilton National Gas Engine built by the Advance Manufacturing Co., Hamilton, Ohio; No. 6 Monitor Combined Corn and Grain Cleaner; Cyclone Dust Collector from clean-

chine, and discharge it onto two longitudinal belt conveyors running in a tunnel at the back of the quay wall. It will then be discharged onto the underground cross-belt conveyors, which will deliver it inside the granary, where two main elevator legs, each capable of handling 250 tons per hour, will raise grain to the top of the building and discharge it onto conveyors for distribution to any one of the 150 bins or of the nine floors, by means of vertical spouts all over the floor portion of the house.

### BILL OF LADING IN THE MESSAGE.

Apropos the demand for a Federal enactment establishing a uniform bill of lading and to prevent the fraudulent issue of bills as well as to establish their legal status, President Taft in his annual message on December 6, said:

Forged and fraudulent bills of lading purporting to be issued against cotton, some months since, resulted in losses of several millions of dollars to American and foreign banking and cotton interests. Foreign bankers then notified American bankers



ELEVATOR OF GEORGE KELLER AT NEWPORT, KY.

er; two stand of elevators with 7x12-in. buckets, one stand for lofting grain received from car, and one for distributing in the elevator; a 20-in. burr mill for grinding meal and feed and cracking corn; a Monitor Cracked Corn Grader, man lift, Howe 6-ton Self-recording-beam Wagon Scale, and a Howe 500-bu. Hopper Scale.

The machinery is arranged to run only such machine as may be needed at one time, all machines being thrown into action by use of friction clutches. All machines have ring-oiling device.

Mr. Keller's business is a local retail proposition in which hay and feed hold a prominent part, and for handling these the plant has ample and convenient facilities.

A new grain storage house is about to be erected at Meadowside Quay, Glasgow, with a capacity of 31,000 tons and "annual turnover of 250,000 tons." The building will be 320x74 ft. and 123 ft. high; there will be 150 bins in capacity from 30 to 275 tons each. About 1,000 feet of the quay will be equipped with elevator rails and underground belt conveyors. Two traveling elevators, each of 250 tons' capacity, will take the grain from a steamer's hold, pass it through an automatic weighing ma-

chine, and discharge it onto two longitudinal belt conveyors running in a tunnel at the back of the quay wall. It will then be discharged onto the underground cross-belt conveyors, which will deliver it inside the granary, where two main elevator legs, each capable of handling 250 tons per hour, will raise grain to the top of the building and discharge it onto conveyors for distribution to any one of the 150 bins or of the nine floors, by means of vertical spouts all over the floor portion of the house.

that, after October 31, 1910, they would not accept bills of exchange drawn against bills of lading for cotton issued by American railroad companies, unless American bankers would guarantee the integrity of the bills of lading. The American bankers rightly maintained that they were not justified in giving such guarantees, and that, if they did so, the United States would be the only country in the world whose bills were so discredited, and whose foreign trade was carried on under such guaranties.

The foreign bankers extended the time at which these guaranties were demanded until December 31, 1910, relying upon us for protection in the meantime, as the money which they furnish to move our cotton crop is of great value to this country.

For the protection of our own people and the preservation of our credit in foreign trade I urge upon Congress the immediate enactment of a law under which one who, in good faith, advances money or credit upon a bill of lading issued by a common carrier upon an interstate or foreign shipment can hold the carrier liable for the value of the goods described in the bill at the valuation specified in the bill, at least to the extent of the advances made in reliance upon it. Such liability exists under the laws of many of the States.

I see no objection to permitting two classes of bills of lading to be issued: (1) Those under which a carrier shall be absolutely liable, as above suggested, and (2) those with respect to which the carrier shall assume no liability except for the



goods actually delivered to the agent issuing the bill. The carrier might be permitted to make a small separate specific charge in addition to the rate of transportation for such guaranteed bill, as an insurance premium against loss from the added risk, thus removing the principal objection which I understand is made by the railroad companies to the imposition of the liability suggested, viz., that the ordinary transportation rate would not compensate them for the liability assumed by the absolute guaranty of the accuracy of the bills of lading.

I further recommend that a punishment of fine and imprisonment be imposed upon railroad agents and shippers for fraud or misrepresentation in connection with the issue of bills of lading issued upon interstate and foreign shipments.

Except as above, I do not recommend any amendment to the interstate commerce law as it stands. I do not now recommend any amendment to the anti-trust law. In other words, it seems to me that the existing legislation with reference to the regulation of corporations and the restraint of their business had reached a point where we can stop for a while and witness the effect of the vigorous execution of the laws on the statute books in restraining the abuses which certainly did exist and which roused the public to demand reform.

If this test develops a need for further legislation, well and good, but until then let us execute what we have. Due to the reform movements of the present decade, there has undoubtedly been a great improvement in business methods and standards. The great body of business men of this country, those who are responsible for its commercial development, now have an earnest desire to obey the law and to square their conduct of business to its requirements and limitations. These will doubtless be made clearer by the decisions of the Supreme Court in cases pending before it.

#### VALUATION OF RAILROADS.

The President made the following suggestions also apropos a matter of much interest should it obtain that the question of rates shall finally be reduced to a question of a definite "reasonable net earnings." Mr. Taft says:

"The Interstate Commerce Commission has recommended appropriations for the purpose of enabling it to enter upon a valuation of all railroads. This has always been within the jurisdiction of the Commission, but the requisite funds have been wanting. Statistics of the value of each railroad would be valuable for many purposes, especially if we ultimately enact any limitations upon the power of the interstate railroads to issue stock and bonds, as I hope we may. I think, therefore, that in order to permit a correct understanding of the facts, it would be wise to make a reasonable appropriation to enable the Interstate Commerce Commission to proceed with due dispatch to the valuation of all railroads. I have no doubt that railroad companies themselves can and will greatly facilitate this valuation and make it much less costly in time and money than has been supposed.

[Special Correspondence.]

#### DEALERS AFTER THE SCOOP-SHOVELERS.

The millers and elevator operators of northwestern Ohio enjoyed one of the most interesting and helpful conferences ever held in this territory in the meeting of the local association held in Lima on Friday, Dec. 9. Seventy-five or more representative members were in attendance.

The morning session was given over to the regular order of routine business and to a presentation and demonstration of the wheat separator manufactured by The Sparta Separator Co., of Sparta, Wis. Mr. Thorbus, the inventor and owner, made the demonstration which showed a perfect separation of wheat from oats and a sub-separation of broken and shriveled wheat from perfect wheat. The invention was proclaimed by all who witnessed the demonstration as being the most wonderful brought to the attention of the trade in many a year.

Reports from every quarter showed an unprecedented demand for ear corn, and it was the expressed consensus of opinion that if the demand for corn in the ear is not supplied by shippers, the corn belt of this section will be invaded by a record-breaking crop of scoop-shovelers. Every elevator operator was urged to load corn in the ear whenever possible.

Scoop-shovelers were denounced in pointed language by W. E. Gest of Defiance. Mr. Gest brands them as pirates of the grain trade, and recommends that they be handled as pirates of the sea were handled in days gone by—extermination by con-

certed action upon the part of the established trade. Mr. Gest claims that the regular grain business has certain rights. He pointed out the fact that a peddler can not invade the limits of our towns or cities to compete with established merchants without a license which in a measure makes him bear his share of the town expenses and responsibility. No individual is permitted to "butt-in" on the mail-carrying business. Uncle Sam is the established party and his rights are protected.

It was clearly the sentiment of those present that the established trade of northwestern Ohio has certain rights and that a determined effort should be made to protect those rights. Some mighty interesting ideas and recommendations were made for handling scoop-shovelers in this territory. A number of firms, most of whom were recognized as being members of various official markets, attracted attention by personal mention as being patrons of scoop-shovelers and other irregular trade. This precipitated a lively discussion and resulted in a motion authorizing the secretary to publish a list of the responsible, established grain shippers of northwestern Ohio. An appeal will be made to the established consuming trade in the various markets for their co-operation in placing the grain business upon a sounder basis by doing all within their power to discourage irregular operations. Consumers and distributing receivers in the various markets are already sitting up and taking note of the fact that the two hundred established shippers of northwestern Ohio mean business. Several of the official markets had representatives present.

Reports on the condition of the new corn indicated an average of 22 to 25 per cent moisture by test and no prospect of anything better than "cool and sweet" from northwestern Ohio before Jan. 1. It is requiring an average of 72½ lbs. of ear corn to make a bushel of 56 lbs. of shelled corn, according to tests compiled by the secretary.

A large sugar refinery has been established in the heart of this territory and sugar-beet raising has spread to enormous proportions. One of the topics scheduled for consideration at this meeting and deferred to the next because of exhausted time is—"What Will the Sugar Beet Business do to the Grain Business?"

This progressive and substantial local association reports an enrollment, including all excepting four of the established shippers of northwestern Ohio, three of whom have not been solicited under the present organization, and one who has been recently dropped from membership.

The purpose of this Association may be comprehended from the following "Declaration of Purpose," extracted from the Preamble and By-Laws:

"It shall be the Purpose of this Association: (1) To inculcate honorable and equitable practices in the trade; (2) To acquire and disseminate valuable business information; (3) To conserve the natural resources of the hay and grain business; (4) To provide for the adjustment of difference by arbitration; (5) To guard hay and grain producing and shipping interests with respect to transportation and marketing problems."

#### EXPORT OF FLAXSEED.

While the exportation of flaxseed from the large producing countries increased by 22 per cent in the last five years, Russia and the Danubian states have decreased in export and the United States has become an importer. The great industries of this country absorb the entire yield. India supplies for foreign shipment from 10,000,000 to 20,000,000 bus. annually, the exportation varying to a greater extent than the production of that country. In 1900 India led all other countries in the export of flaxseed, but in 1901 Argentina took the lead, with India second, the United States third, Russia and the Danube fourth, these comprising all the large exporters at that time.

The total exports in 1909 from the four countries named amounted to 1,107,000 tons against 733,000 tons in 1900. Of this total of 1,107,000 tons Argentina in 1909 supplied 627,000 tons against 223,000 tons in 1900. This means that Argentina has be-

come the great provider of linseed for the world, with all foreign markets more or less dependent upon it for supply. The total production of linseed in 1900 was 1,530,000 tons and in 1909 it was 2,679,000 tons. While both Russia and America are large producers they are also great consumers of this aleaginous grain.—Market Record.

#### WHENCE THE LARGE YIELDS?

In the course of a paper on "Agricultural Statistics," read to the Texas Grain Dealers at their last state convention, Hon. S. H. Dixon, chief clerk of the Texas Department of Agriculture, anticipated a thought to which the editor has recurred in an editorial on the cost of corn production in another place. Mr. Dixon's presentation of facts was not entirely agreeable to certain agriculturists of Texas, who are in the habit of thinking of things as they ought to be, as actually *in esse*, rather than as future possibilities, and the address was wholesome then, and it seems to us *apropos* to reprint now, because no good can come of exaggerating or belittling facts. Mr. Dixon, in part, said:

For an illustration of the special benefits of agricultural statistics to the farmer in guiding him in his business I desire to call attention to the very common error of statement that the improved methods in seed selection in the growing of corn have greatly increased acreage production. This statement has been given wide circulation by those who have been urging the importance of seed selection to the neglect of other important phases of agricultural development. It is important and should have our encouragement; but when we overlook the all important necessity of preserving our soil fertility we fall short of doing our duty. It is true that the agitation of seed selection has kept the production about normal; it is not true that it has done more.

Take the great staple crop, corn. The first reliable statistics we have of this crop began in 1866. The record of this crop throughout the United States by decades disclose the following average yields in bushels in some of the principal corn-growing states (See Agricultural Year Book 1908.):

Period.	Ind.	Ills.	Wis.	Iowa.	Nebr.	Kans.	Tex.
1866-1875.....	32.3	29.9	31.4	34.3	32.5	33.5	23.7
1876-1885.....	29.9	27.2	30.4	31.8	35.5	33.4	19.8
1886-1895.....	28.9	29.0	27.4	30.1	25.2	22.2	19.0
1896-1905.....	34.0	34.5	33.2	32.4	28.0	22.0	17.7
1906-1909.....	36.4	34.9	34.9	33.0	27.4	23.2	21.0
Gain .....	4.1	5.0	3.5	...	...	...	...
Loss .....	...	...	...	1.3	5.1	10.3	2.7

Comparing total yields 1866 and 1909, the difference in acreage yields in bus. we find:

	1866.	1909.	Difference in av.
Indiana .....	127,676,247	196,520,000	+ 3.5
Illinois .....	155,840,350	396,770,000	+ 4.3
Wisconsin .....	9,414,593	50,589,000	+ 4.7
Iowa .....	52,288,184	289,800,000	+ 0
Nebraska .....	2,095,030	194,060,000	- 4.5
Kansas .....	5,527,353	154,225,000	-12.2
Texas .....	20,235,863	122,250,000	-11.0
U. S. ....	867,946,000	2,772,376,000	- 0.6

Comparing the two years, 1866 and 1909, Indiana, Illinois and Wisconsin show approximately a gain of four bushels per acre in yield. The yield by decades from 1866 to 1905 was in the last decade 1.7 bushels more than in the first for Indiana; 4.6 bushels more for Illinois and 1.3 bushels more for Wisconsin. The average yield per annum from 1905 to 1909, both inclusive, has been eight-tenths of a bushel more than in the year 1866 for Indiana, 4.2 bushels more for Illinois, 7.2 bushels more for Wisconsin, 1.9 bushels more for Iowa, seven-tenths of a bushel less for Nebraska, 11.1 bushels less for Kansas and 4.9 bushels less for Texas.

From the foregoing records for the several states it is very apparent that the enormous increase in corn production has been mainly due to the increase of acreage and not from the raising the yield per acre. There has been no permanent increase of acreage production. When we take into consideration the fact that the large increased acreage comes largely from putting in of new land, the importance of preserving our soil's fertility becomes very apparent. These facts should impress upon the farmer its necessity. It is not increased acreage we so badly need to meet the growing consumption, but greater production of each acre.

Warehouse Commissioner Castle of Canada on November 28 began an action against Davidson & Smith, operators of an elevator of 65,000 to 75,000 bus. capacity on the ground that they had refused to take out a license as provided for by the Dominion Act. The conditions are the payment of a fee of \$2 and filing of a \$12,000 bond. The penalty for failure is a fine of \$50 a day. The defendants deal in the grain which is handled in their plants and they do not charge a storage fee, the property in store being their own.



## OATS: DISTRIBUTION AND USES.\*

The oat plant does best in cool, moist climates within the temperate zone, thriving in warm climates only when water is ample. It reaches its best development in Norway, Sweden, Great Britain and Canada. In the United States the best oats are grown in Washington, Idaho and Montana. The favorite habitat of the oat is, therefore, the central and northern portions of the north temperate zone as far north as the circle.

In measured bushels, the volume of the oats crop exceeds that even of corn, the average production of oats 1905-1909 having been 3,694,702,000 bus. against 3,443,169,000 bus. of corn and 3,336,789,000 bus. of wheat, and the oats total given does not include exact data for South America and Asia, where no statistics of the crop are available, but where the production is no doubt considerably more than appears of record. The 1909 crop was the largest for the five years named (4,295,865,000 bus.), of which 1,382,928,000 bus. were produced in the Unit-

12): "little attention is paid to the matter of dirt in market oats, either at country elevators or at the central markets, so that at present the farmer is hardly justified in cleaning his grain before marketing." In the central markets oats are clipped and bleached with sulphur—as to which latter process, Mr. Warburton says: "By this process grain which has been discolored from weathering or from heating in stack or bin is rendered bright and white in appearance. While it is probable that the bleaching process causes little damage to the feeding value of the grain, its germination is often materially lowered, and bleached or purified grain should never be bought for seed without a satisfactory germination test. As weathering or heating usually diminishes the feeding value of grain, chemically purified grain is ordinarily somewhat lower in that respect than its appearance indicates."

Enormous in volume as our oats crop of 1909 was, it was practically all consumed at home, the exportation having been but 2 per cent of the whole (less than 18,000,000 bus.), while 6,691,703 bus.

They are higher in ash than any of the other grains and considerably higher in fat than either barley or wheat. On account of the hulls, oats contain the highest percentage of crude fiber, an undesirable element. Oat straw contains more protein and more fat than corn stover or the straw of any other small grain.

Oats are quite largely used as food for man in the form of oatmeal, or rolled oats, a highly nutritious cereal food. Most of the crop, however, is used for feeding to stock, particularly to horses. No other grain is so popular for feeding to this class of animals. Good results are also secured from feeding oats to dairy cows, sheep, and poultry, though the price of this grain in often too high to justify such use.

Oat straw is more palatable and more nutritious than the straw of any other grain and is nearly equal to corn stover. In addition to its use as a feed, it is largely used for bedding and for the formation of manure. Its fertilizing value is about \$3 a ton.

Hay made from oats or from oats and peas is both palatable and nutritious, being higher in feeding value than timothy hay. These crops can also be used as pasture or cut green for feeding to stock. Sheep do particularly well on oats and peas, either when cut for hay or when used as pasture.

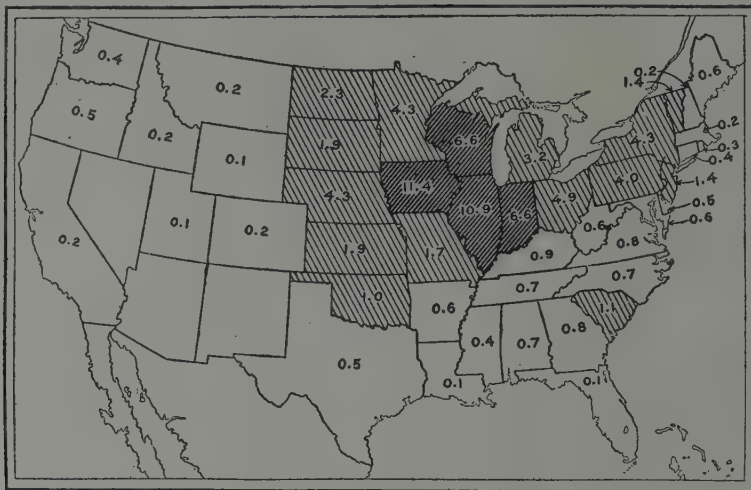


Fig. 1.—Map of the United States, showing the percentage of the total acreage of each State devoted to oats for the ten years 1900-1909. In the States included in the unshaded portion less than 1 per cent of the area is devoted to this crop; in the lightly shaded portion, from 1 to 5 per cent; and in the heavily shaded portion, more than 5 per cent. Where no figures are given, less than one-tenth of 1 per cent is devoted to oats.

ed States and 2,781,932,000 bus. in Europe, the remainder being credited to Asia, Australia and Africa, ranking in the order named.

In the United States the crop ranks fifth in value of farm crops, and is third among the cereals in value and second to corn in volume. The rapid increase in the total production since 1870 is due, however, rather to the increase in acreage (averaging 11,076,822 acres in 1870-9 and 29,643,072 in 1900-1909) rather than to a larger mean yield per acre which in 1870-79 was 28.4 bushels and in 1900-1909 only 29.5 bushels.

The leading oats states for the ten-year period 1900-1909 were Illinois, Iowa, Wisconsin, Minnesota and Nebraska, in the order named. Illinois produced 13.92 per cent and Iowa 13.69 per cent of the total crop in the United States, while the proportion of the five states named was 51.16 per cent of the whole. The maps printed herewith will show graphically the percentages of the whole crop to be credited to each state, the mean yield per acre and the mean value per bushel in cents.

## MARKETING THE OATS CROP.

The bulk of the oats are consumed where grown, the Bureau of Statistics reporting that in the ten years 1900-1909, the average percentage of the crop shipped out of the home county was only 28.7. This, however, would mean that the dealers handled 246,000,000 bus. annually. In 1909 the shipping crop was as large as 330,000,000 bus., or 32.7 per cent, the largest on record.

With characteristic negligence, the American farmer and dealer market dirt, trash, weed seeds and light oats along with the good and so get a low grading which could be raised by first using a fanning mill. "However," says Mr. Warburton (p.

\*Compiled from "Farmers' Bulletin 420," entitled, "Oats: Distribution and Uses," by C. W. Warburton, agronomist in charge of oat investigations, Bureau of Plant Industry, U. S. Dept. of Agriculture (issued November 8, 1910).

were imported, the largest quantity recorded since 1865. The imports, however, were for seed or for milling purposes.

## THE USES OF OATS.

Without going into the details given by Mr. Warburton of the composition and uses of oats, it may suffice here to quote his summary of the matter, as follows:

About 2 pounds of straw are usually produced to 1 pound of grain. The proportion of straw may be

## HANDLING WHEAT AFTER HARVEST.\*

In the campaign for good farming, with its many vital topics, little has thus far been said by agricultural experts on the economic importance of properly caring for grain after the crop has matured and is ready to harvest and be put on the market. The handling of wheat, say, after the harvest, so that it might inspect one grade higher, might mean almost as much as adding a bushel to the average yield on 46,678,000 acres, the average area to wheat during the past ten years; at any rate, it would mean a higher value for wheat of 1½ to 2c. per bushel.

An examination of the methods of handling wheat in the Mississippi Valley, where the bulk of the crop is grown, shows that on a yearly average of more than 29,000,000 acres of wheat, the grain is allowed to stand in the shock from three to six weeks, or longer, unprotected, sometimes not even by a good cap-sheaf.

## EFFECT OF EXPOSURE.

"This exposure to the effect of alternating rain and hot sun causes the kernels to swell and the branny coats to loosen, destroying the natural color or 'bloom' and giving them what is termed a 'bleached' appearance. Even when well shocked and protected by a cap bundle, continued exposure brings on a change in the outer bundles, which are only poorly protected at best, and after a shock has stood a month, or even less, it is found that as a result of this weather damage samples of wheat taken from the outer portions of the shock are at

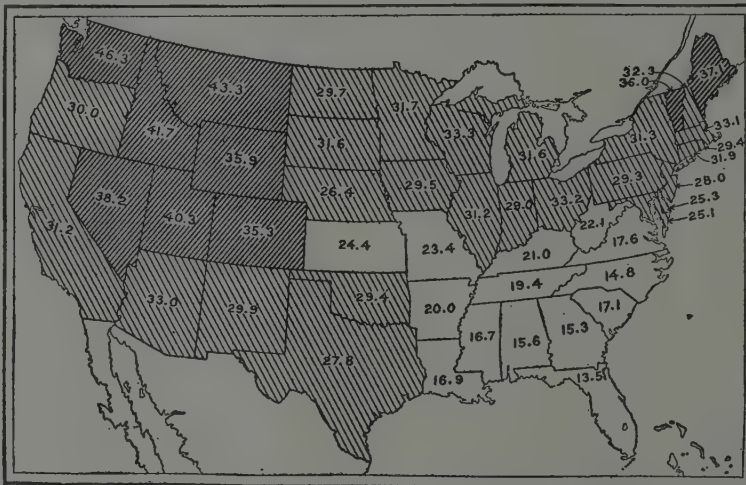


Fig. 2.—Map of the United States, showing the mean yield of oats, in bushels per acre, for the ten years 1900-1909. In the unshaded portion the mean yield is less than 25 bushels; in the lightly shaded portion, from 25 to 35 bushels; and in the heavily shaded portion, more than 35 bushels.

materially reduced, however, in some varieties and in some seasons, or it may be materially increased. The hull usually comprises 30 to 35 per cent of the grain, though the range is from little more than 20 per cent to about 45 per cent.

Analyses show that oats are higher in protein than corn and about equal to wheat and barley.

least a grade poorer than those taken from the inner part of the same shock. In thrashing, this poor wheat is mixed with the good and the grade

\*Compiled from Bureau of Plant Industry, Circular No. 68—"Handling Wheat from Field to Mill," by Leslie A. Fitz, scientific assistant, office of Grain Standardization.



of the whole is lowered. Such exposure and the resulting change in appearance have a direct and immediate effect upon the market value of the grain. The grade that is given to wheat upon the terminal markets depends today almost wholly upon its appearance, condition, and test weight per measured bushel. When the natural color or 'bloom' of the kernel has been destroyed by rain and sun while standing in the shock and the increase in moisture content has caused a corresponding decrease in the test weight per bushel, the grade given is lower than it would be if this same wheat were marketed in good condition without deterioration resulting from exposure to the weather. It is common knowledge among farmers that wheat standing in the shock may readily lose a pound per bushel in test weight on being exposed to a heavy shower. This is especially true where the wheat has been carelessly shocked and is not protected by cap bundles.

#### RELATION OF MOISTURE CONTENT TO TEST WEIGHT.

"Preliminary tests of the relation between moist-

formation concerning it can be gleaned from scientific literature. The following has been advanced as a possible explanation of the change that takes place during the process. It is known that even after wheat is cut the straw contains sufficient plant food to keep the kernels in a growing condition for some time, and a chemical or enzymic action within the plant, by means of which this nutriment is transferred to the grain and stored as starch, may continue for a considerable period. When wheat has been thrashed before going through the sweat, it is probable that a rearrangement of the chemical constituents of the kernels still takes place, and this will account for the sweating of shock-thrashed grain in the bin.

"As chemical action is generally accompanied by the evolution of heat, this may account for the heat usually generated during the sweating process. The amount of heat generated appears to be influenced by the percentage of moisture present. Grain that has been sufficiently ripened and is also very dry will give little evidence through change in tem-

wheat is not allowed to heat enough to become injured, or 'bin-burnt.'"

The above being the theory of millers as to the influence of weathering wheat on its milling quality, Mr. Fitz, working at the Fargo laboratory of the Grain Standardization Office, put it to a practical test by taking grain from the field after exposure to two heavy rains and storing the thrashed wheat in an elevator and stacking other lots of the same cutting of wheat, which were thrashed after having been six weeks in the stack. Milling tests were then made from time to time with both lots of wheat. The results showed that the shock-thrashed wheat had 14.8 per cent of moisture at the machine and a test weight of 55.5 lbs. per bushel, while the stack-thrashed grain showed but 13.2 per cent of moisture and 59 lbs. test weight at thrashing. In milling the stack-thrashed grain there was much less loss in cleaning and less loss in the milling process, there being less bran and more low-grade and shorts and more straight flour than could be gotten out of the shock-thrashed wheat. At the same time, samples of each lot of wheat were sent to Minneapolis for inspection, where the stack-thrashed grain inspected No. 1 Northern against No. 2 Northern for the shock-thrashed.

There is, of course, a difference of cost in handling wheat by the two methods, estimated at say 23.2c. to 24c. per acre in favor of the shock-thrashing method; but the added value of the grain achieved by the stack-thrashing method more than offset such first-cost loss.

#### OTHER ADVANTAGES OF STACKING.

"The farmer who properly stacks his wheat secures it against further loss from exposure to weather, while the one who allows his grain to stand in the shock from three to six weeks, waiting for the thrasher, runs the risk of having it deteriorate in quality from No. 1 or No. 2 to No. 4 or even 'no grade.'

"Another gain which may result from properly stacking the wheat is that it will come out of the stack dry and thrash out clean from chaff, thus preventing the loss sustained when thrashing bundles that are damp and tough from rain or dew. With the bundles in this damp condition, considerable wheat remains in the heads or is blown over as 'whitecaps' and goes to the straw pile. This is usually a total loss, as much of the straw in the great plains area is burned.

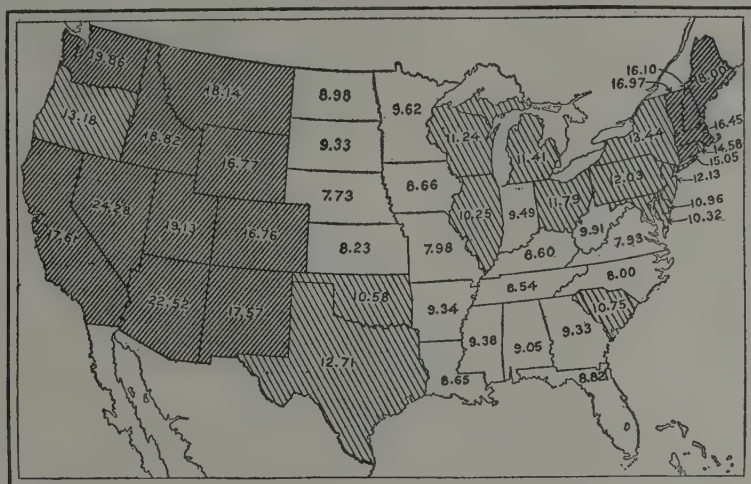
"Improvement in the quality and condition of the wheat is not the only benefit derived from stacking the crop. In addition to making the crop safe, should several heavy rains come after harvest, which would prevent thrashing and cause rapid deterioration, the stack-thrashed grain can be placed in tight bins and kept, or it can be shipped direct to market without imminent danger of heating and spoiling in transit. Also, the shocks are removed from the field, so that plowing may be begun at once; and all good farmers readily agree that such early plowing is productive of good results in the next year's crop."

The first new corn on 'change, Richmond, Va., was offered on November 9 by Jacob & Co. It was a lot of 50 bus. Virginia white corn grown at Tunstalls, Va. It was sold to Alvey Bros., at 76c.

Ira Camp, of La Crosse, Wis., has resigned his position as deputy county treasurer and will have charge of the four warehouses of the Kerr-Gifford Co. at that place.

The Gregg Grain Co., St. Joseph, Mo., on November 12 received the first carload of new corn that has come to the St. Joseph market. The shipment was made by the Oneida Farmers' Shipping Association of Oneida, Kan.

The principal field crops of Ontario, Canada, yielded as follows: Fall wheat, 19,837,172 bushels from 743,473 acres; spring wheat, 2,489,833 bushels from 129,319 acres; barley, 103,107 bushels from 626,144 acres; oats, 102,084,924 bushels from 2,757,933 acres; rye, 1,620,333 bushels from 95,397 acres; buckwheat, 4,693,881 bushels from 194,913 acres; corn for husking, 24, 00,386 bushels; corn for silo, 3,788,364 tons; and hay and clover 5,492,653 tons from 3,204,021 acres.







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#### ADVERTISING.

This paper has a large circulation among the elevator men and grain dealers of the country, and is the best medium in the United States for reaching persons connected with this trade. Advertising rates made known upon application.

#### CORRESPONDENCE.

We solicit correspondence upon all topics of interest connected with the handling of grain or cognate subjects.

**CHICAGO, DECEMBER 15, 1910.**

Official Paper of the Grain Dealers' National Association  
and of the Illinois Grain Dealers' Association.

### A SERIOUS INDICTMENT.

In the course of the good seed propaganda now being carried on in this country the grain men have always had a guiding hand. Although the agricultural press for years hammered away at "good seed" as a perennial topic, always safe, it is in fact that the present universal interest in good seed originated at Des Moines among grain dealers, a few years ago, and had its impetus in the "good seed trains" put on the roads of Iowa by grain dealers with the co-operation of the Ames College faculty and some of the main roads of the state; and elsewhere throughout the country the grain men have been the fathers of the "seed train" and corn exhibition movement that has since developed the numerous "corn shows" and exhibitions of cereals we have seen this year in every state from Texas to Massachusetts.

It is something of a surprise then to have the word come, as it does, from Manhattan, Kansas, that the grain dealers of that state are not only indifferent to the good seed movement, but are represented by a Manhattan teacher as actually hostile to it. Although the Kansas millers and the Kansas City Board of Trade gave \$2,500 to the Manhattan station to help along the work, in the absence of sufficient state funds, some grain men have told the station officers they had no interest in the movement and would not help it, because "they could make more money out of the poor grades of wheat than they could out of wheat that was all graded No. 1 and No. 2." Such is the word that comes to us from Kansas.

That some grain men may hold to this view may be true, but it can hardly be true of the most of them. The sophistication of grain, wherein is the big profit, does not begin at the country elevator except it begins at the farm,

Few elevator men have the facilities for handling grain as mixers; and why they should oppose any movement that would result in more grain as well as better grain is quite beyond us to imagine. The miller is pretty sure to get what wheat he wants, and the dealer can get only the rest, which share will be large or small only as the crop runs.

### MR. SHANAHAN RESIGNS.

The grain trade will no doubt be surprised to learn that Mr. John D. Shanahan, expert in charge of the Grain Standardization Office, has resigned his active connection with the Agricultural Department and on December 10 sailed on the SS. Princess Irene for Europe, where he will remain for some months in the interest of an American private business establishment.

Mr. Shanahan is still a young man, and this may not (and it is to be hoped will not) be the last that may be said of him as a grain expert acting in a public capacity; but his career as such to date is one that may well bring to him more than the common measure of satisfaction that is the best reward of efficient public service. During the short time that he has been in Washington, he has more than fulfilled the expectations of his friends, by developing a system of inquiry into the physical conditions incident to the handling of grain from the harvest field to the consumer, that has already proved permanently valuable to the trade, but which is as yet only in the earlier stages of its usefulness. The steps of the inquiries instituted by him have been marked by a most able series of monographs published by the Office, some of the more striking of which have been by his own hand, while all of them have shown the practicableness of Mr. Shanahan's ideas and the thoroughness of his methods. He is indeed entitled to a large measure of the good wishes and thankful regard of the grain trade.

### PRESIDENT TAFT ON INSURANCE.

President Taft, in the excess of his good nature and characteristic good will toward everybody in general and particular, in referring to the much-needed bill of lading legislation by Congress, has blundered into a revival of the exploded theory that, "The carrier might be permitted to make a small separate specific charge in addition to the rate of transportation for such guaranteed bill, as an insurance premium against loss from the added risk," etc.

The unfairness of this insurance charge has been argued *ad lib.* in the past in connection with the uniform bill of lading; and the carriers have never been able to justify it on any ground save that they "need the money." On the other hand, the argument which this paper was, we believe, the first to advance, that this "insurance" extra would amount to a dangerous differential against the small man, has never been refuted.

The small shipper cannot afford to insure his own grain in transit against loss and damage; the large shipper can; and so, in a competition between the two, the increased rate on the insured shipment might be enough to put the small man out of the game. The

President, like so many others, has this time overlooked the real object of railway control, which is (1) to maintain the parity of all shippers as to the rate and service, eliminating all "the little foxes," like the one under discussion, that destroy such absolute parity; and (2) to protect the producer and the consumer alike against unfair rates. It may be difficult to do these things; but the difficulty is no excuse for playing the "quitter"; and that seems, rather unfortunately, to be Mr. Taft's present attitude—he seems to be tired of the friction of conflict.

### COST OF CORN PRODUCTION.

E. W. Wagner has been propounding the question, "Can the farmer sell corn at 35c or 40c and clear his expenses?" Fifty points replied to the inquiry up to November 5, and of course the "information varies widely."

Suppose the question were asked, "Can a shop girl work for \$7 a week and live?" Well, they do it. The majority of men work all their lives for what many men consider starvation wages; but no one stops to ask whether they "pay expenses." Thousands of farmers have gotten rich in this country selling corn for less than 35c a bushel at the elevator dump or crib, when "figures" show that corn was produced at a loss, and thousands may still get rich at the same game in days to come.

Consider some of the replies to Mr. Wagner's inquiry:

Vincennes, Ind.: "It costs \$9 per acre to produce corn on an average crop."

Burlington, Iowa, sends a very low estimate: "Wheat and oats cost \$4 to \$4.50 per acre to produce and corn about \$7 per acre."

Toledo, Ohio: "Northwest Ohio farms now worth \$125 versus \$80 in 1906. Fifty per cent more work raising corn than wheat and oats."

Kankakee, Ill.: "Our best and largest farmers insist 45 cent corn on \$150 land will not pay 5 per cent on the investment."

What do these letters indicate? Nothing, except that the writers seem to think that the average production of 27.4 bus. of corn per acre (1910, or 25.8 bus. 10-year average) should be the criterion for a price on which to base a 5 per cent income net on an investment of \$150 in land that thirty years ago was estimated to have reached its maximum price at \$60, with corn at 35½c to 42 Dec. Chicago and 41½ to 45 May following.

But has the farmer any right to expect an indefinite continuance of 1909 prices? Assuming that he does, where does he expect the shop-girl, the millions of unskilled laborers, the low-waged office help, or even skilled labor, to "get off at," after a few more years of low acreage production sold at very high prices?

Instead of dwelling on prices on the basis of low-acreage production to keep the farmers' income up to the boom level, what is needed now is the education of the farmer to a realization that his profit must come through the abundance of grain rather than through its scarcity. It costs no more to plow, plant and cultivate for 90 bushels of corn per acre than for 25.8 bus.; why not then insist that the farmer shall make his money growing 90 bus. at 35c rather than 25.8 bus. at 50c? The farmer is not "toting fair." He is not keeping step with the rest of the producing world; the record of the 45 crops since 1865 shows that the farmer has not only not progressed as a corn



producer but has gone backward: the 10-year average (1866-1875) was 26.07 bus.; the 10-year average 1901-1910 was only 25.9 bus. Yet in the meantime the cost of handling corn from Illinois to Seaboard has been reduced nearly 75 per cent; all the benefit of which has gone to the farmer. He has been helped on every hand, but he has not reciprocated, except as he has been able to increase his total yield by skimming the lands Uncle Sam has given him.

Such a record is not creditable to the farmer; and what is more, he does not deserve the artificial prices of scarcity, which are unfair to the other workers of the country, who since 1866 have been able to greatly reduce to the consumer the prices of commodities they produce, in spite of the many artificial props the revenue laws have put into the hands of distributors for the purposes of holding up prices.

#### THE HENNEPIN WATERWAY.

Reports from the Hennepin Canal for the past season are to the effect that that waterway, in spite of its discouraging number of locks, which retard somewhat the speedy movement of barges, has done some business in grain, a single company having shipped about 25,000 bushels of corn per month through the canal the past season.

This is not a large business but perhaps it is enough to encourage the belief that were the old I. & M. Canal locks rebuilt to a size large enough to pass a boat of the same size as may pass the Hennepin locks (600 tons' capacity), the former ancient way, too, might resume its old place as a regulator of rates, if no more, seeing that it is now open to Chicago again through the Sanitary Canal from Joliet. For a comparatively small sum the locks of the I. & M. Canal between the Sanitary Canal and Peru could all be rebuilt in a single season, and the same season would suffice to dredge the channel to the required depth to float a 600-ton barge and so put the canal into commission again; but so simple and inexpensive a solution of the waterway problem in Illinois appeals to no one in authority and to but few individuals.

#### THE RATE ADVANCE HEARING.

The testimony offered before the Commerce Commission for and against the proposed advance in rates was far too voluminous to be reviewed in these columns, save that one very original and vastly important feature is referred to elsewhere. It may be said here, however, that the entire proceeding was one of the most important ever undertaken by the Commission. The proposed rates in issue, if permitted to go into effect, would add \$27,000,000 to the revenues of the railroads and far more than that sum to the cost of commodities to the consumer. This sum would be collected in the territory north of the Ohio and Potomac Rivers and east of the Mississippi; and the inauguration of the new rates would be the signal for other advances in all other parts of the country.

There is this thing to be said of the testimony as a whole, that, save for that brought out by Mr. Brandeis, it was almost all of a purely personal character, purporting to show how the increased rates would affect the in-

terests represented by the witnesses; whereas Mr. Brandeis, who acted as counsel for the shippers without fee and as a personal service only to the cause of a lower cost of living, challenged the proposed rates as neither just nor reasonable nor, indeed, proper, considering the fact that as greater efficiency, well within the reach of the railways, would result in greater net income to the carriers, without taxing the waste to the consuming public. Mr. Brandeis held that the railroads, like all other producers, should first reduce the cost of transportation to an absolute minimum before being permitted to increase their rates.

#### GRAIN TRADE PUBLICITY.

The specialty of Mr. Bert Ball of St. Louis is publicity; and speaking, as he did, as an expert, at the Council meeting in New York in September, his views on grain trade "publicity" are worth reading. Personally, however, we feel that the address verges toward "glittering generalities" rather than reaches to specific particulars in a practical way; although we must admit there is the "point of view" to be considered.

Mr. Ball apparently does not place much value on the "checkerboard card" in the trade journals. Some people, even grain receivers, do not—it doesn't appeal as "publicity." But it depends on what one wants to do when he buys "publicity." If a man wants to sell an elephant, he will naturally "advertise" the fact in a paper read by circus owners or "zoo" managers; but the manufacturer of corsets "buys publicity" in papers read by women. So, too, the grain receiver who wants to reach grain shippers should advertise in the grain trade journals as well as use other means for finding those who are shippers or buyers. Houses whose clients are speculators only must make their appeal through the financial papers read by that class of investors. These, it seems to us, are the fundamentals of grain trade "publicity," all else being "trimmin's."

The trouble with the "grain trade," in its relation to the general public, is not a want of publicity, as we infer from Mr. Ball's speech, but too much publicity of a certain kind. As we have repeatedly said in these columns, the worst enemies of the grain exchanges are the officially recognized "market reporters," especially those representing the "yellow" type of newspapers. That tribe of reporters have long since passed the stage of their experience when common, hum-drum fact is worthy their attention. They deal, or at least their papers deal, with sensations only; if the market news is not sensational, and it rarely is sensational, they must make it so.

The result is, the public is daily and hourly reading as news (truth) something that is essentially a false statement of fact and so very naturally obtains a false impression and is led into a complete misunderstanding of the functions of the grain exchanges. By the "yellow" reporter the exchanges are treated merely as great public gambling houses; their proceedings are written of as great gambling struggles; the profits of trades are never referred to as profits but always as "winnings"; and so on. In short, the business of the exchanges is seldom or never treated as the machinery at work marketing

the world's cereal crops and provisions, but the exchanges are only places where "plungers manipulate the prices of the people's food"—always to the detriment of the people.

The problem, then, as we see it, before the exchanges is not so much more "publicity" but how to get the right kind—how to curb the sensational market reporter—to induce or make him treat the daily proceedings of the "market" for what they are—the phenomena incidental to the fixing of equitable prices of grain in all the markets of the world simultaneously; not as the mere "plays" of a few rich forestallers made notorious by the yellow press. Let the "plungers" be treated for what they are,—not as heroes of the hour but only as commercial nuisances, and let the public be properly instructed as to the functions of the exchanges, after the manner of Mr. Merrill's lucid and convincing address at Des Moines, and in a short time the exchanges may find the way open to bring the public to a true understanding of what is actually going on upon their floors.

#### SASKATCHEWAN COMMISSION "DUCKS."

The Royal Commission of Saskatchewan has turned down the Grain Growers' Association proposition that the province follow the lead of Manitoba, and buy and operate the grain elevators for the benefit of the farmers. The Commission say in effect that they are willing to let Manitoba first try the experiment of state ownership. Considering the composition of the Commission, this decision no doubt meant great self-restraint and brought some Still, an examination of the report does not remove the suspicion that the Commission has its own share of serpentine wisdom.

And so they straddled. They put state ownership behind them, but they ask the provincial government to loan to a "co-operative" company composed of grain owners only money to finance their operation of the elevators. When we reflect that government loans to the people for any purpose are rarely or ever repaid, the difference between the Manitoba plan and that of the Commission is the difference between thumbs up and thumbs down.

Omitting the state loan feature, the plan of co-operation would be unobjectionable. If the middlemen whom the farmers must use are unfair, a co-operative company organized to do their service would be a complete remedy; but the trouble is the farmers of Canada are like other farmers in like situation—they want the "hot chestnuts," but they prefer to have them taken from the fire by some one else, without danger or expense to themselves; hence it is a sure bet that the Commission's co-operative scheme will never materialize.

The telegraph company's proposition that the measure of recoverable damages resulting from failure to deliver a message is the amount paid for the message and no more, received a rude jar in Michigan and at Washington, whose courts allowed the damages shown to have been sustained, in spite of the agreement on the company's blank that in case of non-delivery the company would admit liability only for the cost of the message.



## EDITORIAL MENTION

Are your elevator brine tanks in good order, with water pails handy?

There are a number of good things in the courts departments of this issue that are worth looking at.

The new slogan is: "Preach the evangel of good seed and good cultivation?" Are you doing your share?

The cold weather, while favorable for handling new corn, is not encouraging to shippers where car shortage is already in sight.

It is probable that if some of Mr. Brandeis' "scientific management" ideas were turned loose in the country elevator belt they would "see things at night."

A good many farmers who gambled for a rise on their 1909 wheat, oats and corn are holding down the stool of repentance good and hard this winter.

There will be plenty of corn for all; so don't try to buy all of it for early spring delivery—it may go to the bad again as it did last spring, and spoil your temper.

Mr. Beecham (see "Transportation," p. 354) throws out some hints to shippers who call on the carrier to trace stray shipments that ought to be made a mental note of.

The car famine is not yet here; but there are rumors of it "in spots"; and it is certain, because official reports say so, that the number of idle cars is steadily decreasing from one fortnight's report to another.

Are you sure you started in good order that car that ran short—good cooperage, openings all closed and sealed? Several thousand shippers in this country habitually forget some of these details. Are you one of them?

The Bureau of Statistics has returned to the "before closing" habit of publishing the monthly Crop Report—in November at 1 o'clock and in December at noon, Chicago. If you don't like the change, or if you do like it, tell Victor H. Olmstead, chief, at Washington.

Mr. Patten seems to be enjoying his wealth quite as Mr. Carnegie does his—by giving it away, now he has had the pleasure of making it. Some rich men talk of the fierce struggle involved in money making, but if they did not really enjoy the game, there would be precious few great fortunes.

Mr. Kuné has entered upon what we believe will prove to be an attractive series of reminiscential articles on Chicago Board of Trade and its older members. Mr. Kuné, who but recently transferred his membership, was a member of the Board for very many years—few for a longer time; and having a good memory and been always a keen observer through jour-

nalistic eyes, his review of the past of the Board since the '50s, when he came to America, can hardly be less than most interesting.

The scoop-shoveler has again invaded northwestern Ohio and vicinity, and naturally the dealers there don't like it. As naturally, too, they think the receivers who encourage these itinerant and sometimes predaceous gentry ought to look to themselves, and consider whether it pays in the long run to antagonize the regular trade in that fashion.

So the Indiana attorney-general has climbed into the limelight of the grand stand, a telegram of December 12 saying that 53 members of the Hay and Grain Producers' and Shippers' Association of northeastern Indiana had been made defendants in a suit brought by Attorney-General Bingham, who alleges that the association is an organization in restraint of trade, and who secured a restraining order from Judge O'Rourke at Fort Wayne. Well, well; we had supposed Kansas had the exclusive call on this sort of thing; but one can never tell what will happen in these days.

The Eastern grain men claim a "victory" in the order of the Commerce Commission, that bills of lading may not be lawfully dated until the grain is in "actual transit"; in other words, delivery to the belt lines is not "actual transit," the latter beginning only when, going east, say, the grain has been delivered to the Eastern trunk line. This order, therefore, penalizes the fiction—more common with merchandise shippers than with grain now, although "down East" they complain of the latter—that "the goods have been shipped," whereas in fact the shipper is only working a flim-flam to cover his own delinquency and tardiness.

The Indiana Grain Dealers' Association, through the president, W. B. Foresman, has presented a handsome silver trophy to the Indiana Corn Growers' Association, to be awarded annually for the best sample of oats exhibited at the State Grain Show to be held at Purdue University. This trophy is a valuable addition to the many premiums to be offered at the state show and will do its share to stimulate the culture of more and better oats. Now let the dealers themselves do their part by refusing to buy oats except on their merits, and the good oats problem of Indiana will solve itself; but so long as dealers buy "oats" and that's all, the quality of the crop can never be permanently bettered—there's no pecuniary incentive to better it.

Mr. Fitz' circular on "Handling Wheat," condensed for these columns, tells the story of the waste, by loss of milling value and in grade when grain is sold on inspector's grade, when wheat is thrashed from the shock as compared with stack thrashing. This is the first time the explanation of the loss, well understood by millers and most expert dealers, has been made in print, so far as the writer is aware, and it is probably new to most readers, who should pass it on to the farmer who is the first sufferer from the defects of his own methods. When dealers and millers pay for shock-thrashed grain just what they should and no more,

there will be considerable loss to the farmer; and if dealers and millers insist on making the discount, as they should, in the interest of the consumer, the farmer will ultimately stop the waste.

The attempt of the burley tobacco pool in Kentucky, the outgrowth of the Society of Equity tomfoolery of holding tobacco to force high prices by scarcity—a plan of campaign the Society has been trying to carry on in the West and Northwest with grain and which the rice growers are now tampering with—came to a collapse early in November, leaving the growers with two crops of tobacco on hand to dispose of on a falling market. Meantime they have been carrying the stuff at their own expense, the bankers getting the profits on both crops. After, then, the experts in agriculture have had their fling instructing the farmers how to farm, why not engage another set of experts to go about the country to teach the farmers the first principles of business economics—the law of supply and demand, of prices and price-making, the economic meaning of trusts, artificial scarcity, the functions of the public exchanges, etc.?

"A carrier is warranted in requiring claims to be accompanied and supported by evidence of validity," says a report made by a committee of the National Association of Railway Commissioners; and furthermore, "a carrier may properly establish rules governing the manner of the presentation of claims." Shippers should recognize the fact that the carriers do these very things, and without questioning their right in any way, they can best serve their own interests by conforming strictly to the letter of the carriers' requirements when filing claims. By so doing the collection of a valid claim will undoubtedly be hastened by the removal of friction. Too many shippers think their own way of stating a claim and presenting evidence thereof is the more convenient, and stubbornly insist that it is so in spite of the fact that their way may not be that of the carrier against whom a claim is filed; and friction and delay result immediately when both might be avoided.

Mr. McCaull was quite right at Des Moines in complimenting the railroads on their practical interest in more and better grain production. Railroad men are not "wholly bad;" many of them suffer from the ponderosity of the "man higher up," whose self-sufficiency only too often causes the friction of railways with the shipping public. The latter ought to and in the main, we believe, do recognize the services of the carriers in the development of the country and its industry. But the pressure of population on the resources of the country has now become so great that in order for all to live in some degree of comfort, the elimination of all waste must begin at once. Since after the production of food itself, transportation is the basic industry of all industries, every practical economy possible for the carriers to effect must obtain before the consumer, who pays the freight, will consent to higher rates than now appear to be necessary to maintain the existing roads as business investments and



to tempt capital to the construction of new lines as needed. The day of the demagogue who lashes the carriers is going, it is said; so too is the day of the financial exploitation of the railways at the expense of the consuming public: we must all "get down to business" as business is in a crowded country.

The railroad men are candid if not polite in speaking of Mr. Brandeis and his scientific management ideas. Vice President Park of the Illinois Central said: "Brandeis? Why, he's a joke—doesn't know what he is talking about—is a fool." Well, coming from an Illinois Central man, this sounds a bit peculiar. Surely if there is any branch of railroad management that ought to be by now reduced to a science, it is the accounting department; yet a stockholder, the other day, in beginning suit against the directors to recover from them the amount alleged to have been lost in the car-repair frauds, declared the total was \$6,500,000; and yet this sum was stolen within a very few years and the directors and officers and the accounting department never found it out until one of the gang "squealed" because he did not get his share of the swag! The I. C. officers ought to talk of men like Mr. Brandeis and Mr. Emerson and the other Brandeis witnesses as "jokes" and "fools"—it sounds real pretty and convincing!

Dr. Duvel has published a new circular on the Brown-Duvel Moisture Tester, which, at the risk of a possible tautology (see these columns for April, 1907), we reproduce in full elsewhere. But the moisture tester is so important an instrument in the grain trade in these days there can hardly be too much said in the way of instruction or caution in its use. That the tester has shown variation in its results has not always been the fault of the apparatus itself or of the grain under test, but of the operator, who may still have been a man of the best of intentions. To such a one the suggestions Dr. Duvel now offers will be doubly welcomed, while to those taking up the work for the first time the circular will be an invaluable aid to obtain that accuracy which is so essential to the work, both for its own sake as well as to give the tester the full measure of usefulness that it should and can have in right hands operating it conscientiously and frankly.

Secretary Wilson's remedy for high prices of food products is (1) co-operation to eliminate the middleman, and (2) going for the retailer. Concerning the middleman who handles the farmer's grain, Mr. Merrill's address at Des Moines sufficiently demolishes the Secretary's indictment so far as he is concerned. The middleman in grain has reduced the cost of handling grain enormously since the Chicago Board was organized in 1848, while the many other markets created by other exchanges of later birth have so multiplied competitive markets that it is nonsense in these days to pretend that the farmer does not get for his grain every penny it is worth in the best market accessible to him, the grain exchange being, as Mr. Merrill showed, an absolute check upon any tendency to or effort at monopoly. As for Mr. Secretary's suggestion that "Elimination of

the middleman by means of farmers' co-operative selling organizations and consumers' co-operative buying associations working in harmony will not only reduce prices the consumer has to pay but increase farmers' profits and equalize prices all over the country so that producers everywhere will get a fair share of profit," that is hardly true, in grain, at least. The economies mentioned are never obtained save through the efforts of experts in the business of distribution; and the direct producer who is also an expert distributing producer (for the two are parts of one process) is as rare as diamonds in a Michigan sand dune.

Trust a Frenchman for cleverness. When a member of the parliament asked the Minister of Commerce whether "in view of the increasing price of bread and partial failure of the harvest, he was not prepared to introduce a bill suspending for at least a year the import duty on corn and flour," the Minister gravely replied—and all France hung on his words—that "from reports of the world's production of wheat this year it is clear that the shortage in France can be met without difficulty by importations from abroad at prices not higher than those of the home-grown corn!" Wise Minister—as if a deputy might expect something different; and then as the Minister further sagely remarked that "the reduction duties would only have the effect of throwing on the French market a large quantity of foreign produce which would seriously depress the home market to the detriment of French producers without any real benefit to the consumer," the deputy retired, with a feeling that he himself would be an expensive article of barter at *trente sous*.

The council of North American Grain Exchanges (which will hold its next meeting at Chicago on February 6, 1911) is justifying itself by the vigor of its campaign in behalf of more grain, which, in spite of the fact that wheat and corn at least have kept pace with population, has apparently been growing scarcer, certainly to a degree that has been perceptibly felt in the export trade and on the high level of general food prices. It is true the rate of production per acre has not materially changed since 1866, but it does appear that the per capita yield of corn has increased from 23.6 bu. in 1890 and 28.5 bu. in 1900 to 34.2 bu. in 1910, and of wheat from 5.38 bu. in 1890 and 6.75 in 1900 to 7.29 bu. in 1910. Just why under the circumstances wheat and corn prices should have remained so high for so long a period, to the detriment of home consumers and to the export trade alike, is not entirely clear. But if the general belief is right that food prices will permanently fall to a reasonable level only when grain prices are permanently lower (and certainly the export trade cannot be regained until a lower level of prices is reached), it is high time that the great influence the exchanges may exert, working as a harmonious whole, should be brought to bear on the situation. The industrial condition of the country, the moral and material welfare of its manual labor and of the millions engaged otherwise in productive industry, are so bound up in cheap food, that no effort to encourage and help our farmers to produce more,

making their profits on large quantity at low prices rather than by high prices for small quantity, can be looked upon otherwise than favorably and with a fervent wish of "God speed."

J. C. F. Merrill, vice-president of the Board of Trade of Chicago, has added another to the growing list of notable educational papers brought into being by the activities of the Council of Grain Exchanges, which was in part responsible for "grain improvement day" at Des Moines, as reported elsewhere. Mr. Merrill as an expounder of the technicalities of the grain trade is always frank and convincing; and it would result in great public good and much discomfiture to a certain class of demagogues who talk to and write for farmers, if those good people who deem boards of trades and their members parasites on the farmer and the consumer alike and that trading for future delivery is a curse, could be induced to give a little time to the study of the fundamental principle of commerce and trade in grain so admirably formulated by Mr. Merrill in the Des Moines paper. The common people at heart always mean well; they are to be trusted, when they know the truth, but always to be feared when they are ignorant; and many farmers are profoundly ignorant of the ways and means that enable them to sell their grain at any moment at the highest market price for its quality and get spot cash for it. Mr. Merrill's paper should be circulated among such.

An attempt by the editor to obtain from the trade a statement of views on the not remote possibility of free wheat from Canada by reciprocity treaty, was disappointing; many of those addressed who should best be able to intelligently forecast its effect on the trade, on producers and consumers, being reluctant to put them on paper for publication. Mr. J. L. McCaull, of Minneapolis, stands by his argument for free wheat, made at the Peoria national convention of October 2, 1902. Mr. B. G. Ellsworth, of L. Bartlett & Son Co., Milwaukee, believes that "it would be greatly to the advantage of this country as a whole to have Canadian grains admitted free; it is becoming more and more evident that even with our splendid big crops we cannot produce enough grain of all kinds to take care of our domestic wants at a reasonable figure." Mr. Dennis of Baltimore thinks free wheat would "tend to the legitimate broadening of our import and export trade." Another well-known authority, who desires to be nameless in this connection, says the proposition would be to the advantage of grain dealers, exporters, millers and consumers. The Canadian West seems so anxious for lower duties at home that on December 16 a deputation of grain growers will go to Ottawa to urge a change in the tariff and to urge the reciprocity treaty with the U. S., which is now in negotiation and which New England, at least, has been asking for for some years. So the question we endeavored to open here for discussion is sure to come to the front not long hence; and we should be glad to have any reader express his views, whatever they may be, whether he has otherwise been invited to do so or not.



TRADE NOTES

J. H. Pank has gone with the Richmond Manufacturing Co. of Lockport, N. Y., and will represent them in Northwestern territory with headquarters at Minneapolis, Minn.

R. H. Varney has succeeded A. R. Colton as manager of the Kansas City branch of the Great Western Manufacturing Company of Leavenworth, Kans. Mr. Varney has been connected with the Kansas City branch for thirteen years.

The National Automatic Scale Co. of Bloomington, Ill., has had an excellent year in sales of its scales. Users of the scale everywhere attest to its efficiency and accuracy and this has resulted in a largely increased number of orders over last year.

J. Bolgiano & Son of Baltimore, Md., one of the largest feed seed firms of the East, have been large handlers recently of White Kaffir corn. They have also been offering great bargains recently in unshelled Kaffir corn, Canada field peas, cottonseed meal, and Favey corn chop.

The Macdonald Engineering Co. of Chicago has been unusually busy recently on grain storage for flour mills in addition to their large terminal grain elevator contracts. Their style of concrete construction is very popular with mill owners and makes an excellent storage at reasonable cost.

"Perfect cleaning, durability, and ease of regulation" are a few of the essential features claimed by the Prinz & Rau Mfg. Co. of Milwaukee, Wis., for their Prinz Automatic Separator. That this machine is popular among grain dealers is evidenced by its large sales. A full description will be sent by the manufacturers to all grain men and millers on request.

The Union Iron Works of Decatur, Ill., report sales for the past year the largest in the firm's history. They are making plans for a new building and negotiations are under way for land on which to build. Work is expected to start in the spring as soon as weather will permit. The new addition will embrace a foundry, machine shop and power plant.

The A. T. Ferrell & Co. "Clipper" grain and corn cleaners manufactured at Saginaw, W. S., Mich., are making new records daily in the class and quality of the work they accomplish. The No. 69 Clipper is especially adapted for doing the work of a first class grain receiving cleaner for local elevators. A 30-day guarantee is given with each machine. Catalogue and discounts are sent immediately on request.

"Graphite" for November contains a handsome half tone of the quarter million bushel elevator of the Mutual Terminal Elevator at Buffalo, N. Y. All of the exposed metal work of the elevator was painted in 1902 with Dixon's Silica Graphite Paint, natural color. The Joseph Dixon Crucible Co. of Jersey City, N. J., has just received an order for eight barrels of paint to be used on the structure, which means that Dixon's paint gave eight years' service. A good record.

The Richardson Scale Co. of New York City has been running their scale factory at full time the last few months, both on new and repeat orders. As a sacking scale the company claims that their scale has no equal for accuracy and speed and a record of 5 to 6 100-pound bags of feed automatically weighed, counted and packed per minute with one man only has been repeatedly made. Scales can be shipped promptly from the factory on orders to the home or to the Chicago or Minneapolis office.

The S. Howes Co., of Silver Creek, N. Y., manufacturers of the well known line of "Eureka" Grain Cleaning Machinery, have for a number of years been furnishing pads for their Celluloid Desk Calendar, which was sent out to their friends some years ago. Any grain dealer or miller who has one of these calendars and has not yet received the calendar pad for 1911 will be sent one on request to the company. Also any grain dealer or miller that has not one of the desk calendars in use will have

one furnished him promptly by the S. Howes Co. on receipt of a request.

The Barnard & Leas Mfg. Co. of Moline, Ill., is calling attention to the immense corn crop of this year and to the advisability of being ready to handle it on the part of the grain dealer. As a means of helping to handle it in a proper manner they also call attention to their Victor Corn Sheller and Corn Cleaner, standard machines of their class. Their line embraced in their latest catalogue also includes feed mills with ball or standard bearings, separators of all kinds for mills and elevators, scourers, aspirators, grain dryers and cereal mill outfits.

THE RUSSIAN GRAIN TRADE.

While passing through Russia to his post at Habarl, Tasmania, Consul Henry D. Baker sent to the Department of Commerce and Labor a superficial report on the Russian grain trade as it appeared after the harvest of 1909. The conditions are substantially the same to-day, Russia being as slow to change as the more easterly peoples whom in many respects the Russians resemble, and indeed are derived from.

The question was whether the Russian peasant would be likely to imitate the American and English farmer in holding wheat in order to prevent the usual break in prices that always comes immediately after harvest, to which the reply was made, substantially, that "not only is the Russian peasant, as a rule, too poor and deeply in debt to be able to hold the product of his harvest, but the elevators of Russia have altogether too small capacity to hold a large crop, and if the crop were not promptly exported it would rot on the ground. The Russian exporter said:

"The farmers have not the advantage of a great institution like your Chicago Board of Trade, where there is an active market and quotations established which are public property, and also where you have splendid facilities for trading in the warehouse receipts and the like. The farmers in Russia are at the mercy of a few cash buyers, who are afraid to purchase large lots because of the difficulties in storage and of freight transit.

"Moreover, most farmers are quite ignorant of what constitutes a fair price for their products. There may be a big 'boom' in wheat at Chicago, but our peasants, as a rule, know nothing of any such movements in the world's markets, and always they will sell their wheat as soon as they can for what ever it will bring."

CAUSES OF CROP DAMAGES IN 1909.

From reports of about 30,000 correspondents of the Bureau of Statistics, Department of Agriculture, the following tabulation has been prepared by the Crop Reporter, showing what percentage of the total damage suffered by crops in 1909 was due to each cause specified:

Cause of damage.	Wheat.		Corn.		Oats.		Barley.		Rye.		Hay.	
	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.
Deficient moisture.	31.6	47.7	36.5	36.0	45.9	63.9						
Excessive moisture.	16.4	21.4	24.3	20.1	12.2	10.9						
Floods	3	4.6	2.3	1.9	1.4	2.7						
Hail	7.9	1.5	3.7	6.5	1.4	.6						
Hot winds	5.2	5.7	3.7	8.9	2.0	1.6						
Storms	2.6	2.3	3.7	3.3	2.0	1.1						
Frost or winter kill	11.2	3.0	3.3	3.7	20.9	7.1						
Other climatic	1.3	.8	1.4	.9	.7	1.6						
Total climatic	79.5	87.0	78.9	81.3	86.5	89.5						
Plant diseases	7.9	.8	11.2	7.5	2.0	.6						
Insect pests	6.0	7.6	2.3	1.4	.7	2.7						
Animal pests	2.0	1.2	.5	2.3	.0	.6						
Defective seed	.7	1.5	1.9	.9	.7	.6						
Unknown causes	3.9	1.9	5.2	6.6	10.1	6.0						
Total	100.0	100.0	100.0	100.0	100.0	100.0						

A car of new No. 3 yellow corn was received at Chicago on November 18 by Gardiner B. Van Ness from central Illinois that contained only 16.25 per cent of moisture.

At present rate of corn arrivals, Chicago will only have 2,000,000 in public and private elevators early in January, against an average of 5,500,000 past two years.—E. W. Wagner.

CROP REPORTS

The corn crop in Ohio is smaller than the Government report states.

Wheat in Nebraska is not only suffering from drouth but is full of insect life.

Indiana corn yielded about 34 bushels per acre, making crop of about 105,000,000 bushels. The quality is variable; some of it is molding in the field.

The VanDusen-Harrington Co. of Minneapolis, Minn., estimates the amount of fall plowing done this year to be 10 per cent greater than at the same time any previous year.

The Hessian fly is reported in Indiana, Ohio, Michigan, Illinois and sections of Iowa, Missouri, Maryland and Nebraska and threatens to do serious damage unless the spring is wet.

The dry weather in Missouri has brought more good than harm, as the late corn has been saved and the condition of early corn has been greatly improved. Grass and fall pastures have suffered in some districts but no serious damage has been done. Late sown wheat has not germinated as it would have done with moisture but it is still uninjured.

Estimates in the 1910 Red Book of the Bureau of Labor Statistics by Labor Commissioner J. C. A. Hiller places the corn crop of Missouri at 271,500,000 bushels, making an approximate value of \$135,750,000. This is the largest yield since 1902 when the production amounted to 364,332,705 bushels. Missouri now holds third place among the states as a corn producing commonwealth.

The official report of the Ohio Department of Agriculture of December 1, states that the condition of wheat as compared with an average is 94 per cent showing a decline of 8 per cent in comparison with the estimate of November 1. About 3,074,292 acres were planted in corn in 1910, the total estimate of the production being 105,512,245 bushels. Clover yielded on an average 1.3 bushels per acre.

G. J. Gibbs, secretary and treasurer of the Texas Grain Dealers' Association of Fort Worth, Texas, says that while the drouth has been severe in Texas it has also been bad in other states of the southwest, particularly in Kansas and Oklahoma. A good part of the wheat planted in Texas is up to a fair stand, but the plant is very small and there is practically no pasturage. This will result in a heavy use of the Texas corn crop by feeders, so that the state will have to import a lot of northern corn for winter and spring use. He believes that the state has planted as much, if not more, wheat than was sowed last year. Texas will have about 125,000,000 bushels of corn, but a good part of this is very light so that the crop may reach only 100,000,000 bushels.

THE GOVERNMENT REPORT.

The December Crop Report makes the following estimates:

Winter Wheat.—Area sown this fall 2. per cent more than the revised estimated area sown in fall of 1909, equivalent to an increase of 828,000 acres, the indicated total area being 34,485,000 acres. Condition on December 1 was 82.5, against 90.8 and 85.3 December 1, 1909, and 1908, respectively, and a ten-year average of 91.3.

Rye.—Area sown this fall 1.2 per cent less than the revised estimated area sown in fall of 1909, equivalent to a decrease of 25,000 acres, the indicated total area being 2,138,000 acres. Condition on December 1 was 92.6, against 94.1 and 87.6 on December 1, 1909, and 1908, respectively, and a ten-year average of 93.5.

Translated this would seem to mean that the acreage to winter wheat is \$28,000 acres greater than in 1909, the indicated total being 34,485,000 acres, while the acreage of rye is 25,000 less than in 1909, the total being 2,138,000 acres.

Never before in the history of the United States has so extensive an area being sown with winter wheat. The previous record was in 1902, when 34,071,000 acres were winter sown. The condition report is unfavorable, 82.5 being lower than announced in any of the Government December reports since 1896. Excepting that one year, it is the lowest of any December in nearly a quarter of a century.

Comparison of yesterday's returns is as follows (last 000 omitted):

Crop.	Dec. Condition.	Area Sown.	Area Harvest.	Final Crop.
1910-11	82.5	34,485	.....	.....
1909-10	95.8	33,483	29,044	458,294
1908-09	85.3	29,884	27,871	446,366
1907-08	91.1	31,069	30,319	347,908
1906-07	94.1	31,665	28,132	409,442
1905-06	94.1	31,340	29,600	492,888
1904-05	82.9	31,155	29,864	428,462
1903-04	86.6	32,016	26,866	332,935
1902-03	99.7	34,071	32,511	399,867
1901-02	86.7	32,000	28,581	411,789



YIELD AND QUALITY OF CORN.

The Crop Reporter in its preliminary estimate of the corn crop, yield and quality, for 1910, gives the subjoined comparisons by groups of states, one inference from which is that the great total production of corn in the Middle West is due to the large acreage and richer soil rather than to better farming than is practiced in the North Atlantic States, while the low average production in the South Central States is doubtless due to still poorer methods, and to soils that have been "worn out," so to say, by years of cropping to cotton only. As a rule, quality has followed acreage quantity, except that in the South Atlantic States the lowest average yield per acre is accompanied by next to the highest average in quality. The figures are as follows:

State, Territory, or Division.	Yield per Acre.			Quality.		
	1910.	1909.	10-yr. aver.	1910.	1909.	10-yr. aver.
State, Territory, or Division.	Bu. Bu.	Bu. Bu.	P.c. P.c.	P.c. P.c.	P.c. P.c.	P.c. P.c.
Maine	46.0	38.0	35.4	99	84	86
New Hampshire	45.2	35.1	33.1	95	87	86
Vermont	43.0	37.0	34.5	96	84	85
Massachusetts	47.0	38.0	36.1	95	87	87
Rhode Island	40.0	33.2	33.0	97	92	91
Connecticut	53.2	41.0	36.8	96	89	89
New York	38.3	36.0	31.0	89	79	82
New Jersey	36.0	32.7	34.1	92	87	88
Pennsylvania	41.0	32.0	34.4	90	77	84
N. Atlantic	40.3	33.6	33.6	90.5	79.5	84.2
Delaware	31.8	31.0	29.1	90	87	90
Maryland	33.5	31.4	32.9	88	80	88
Virginia	25.5	23.2	22.7	92	85	88
West Virginia	26.0	31.4	27.5	81	88	86
North Carolina	18.8	16.8	14.8	90	87	86
South Carolina	18.5	16.7	11.6	90	88	85
Georgia	14.3	13.9	11.5	90	91	88
Florida	13.0	12.6	10.2	87	89	86
S. Atlantic	19.4	18.5	15.9	89.4	87.3	87.1
Ohio	36.4	39.5	35.6	82	89	85
Indiana	39.5	40.0	34.7	88	91	87
Illinois	39.0	35.9	34.5	90	89	88
Michigan	32.4	35.4	32.7	86	85	83
Wisconsin	32.5	33.0	33.2	87	84	82
N. C. E. Miss. R.	37.7	37.2	34.5	87.8	88.8	86.4
Minnesota	32.7	34.8	29.4	85	92	80
Iowa	36.3	31.5	32.3	95	87	84
Missouri	32.8	26.4	28.6	88	79	82
North Dakota	18.0	31.0	23.4	63	90	79
South Dakota	26.0	31.7	27.4	77	92	83
Nebraska	25.8	24.3	27.4	87	86	83
Kansas	19.0	19.9	22.4	79	75	80
N. C. W. Miss. R.	28.6	26.7	28.1	87.8	83.8	82.5
Kentucky	28.6	29.0	26.7	87	86	84
Tennessee	25.9	22.0	23.0	89	84	84
Alabama	18.0	13.5	13.5	92	81	84
Mississippi	20.5	14.5	15.2	94	76	80
Louisiana	23.6	23.0	17.5	91	90	82
Texas	20.2	15.0	19.0	81	66	76
Oklahoma	16.0	17.0	24.2	65	72	80
Arkansas	24.0	18.0	18.7	88	75	78
S. Central	21.4	18.3	20.1	84.5	77.6	80.4
Montana	25.0	35.0	23.2	78	92	86
Wyoming	9.0	28.0	28.0	80	92	91
Colorado	19.9	24.2	21.2	79	88	85
New Mexico	23.0	31.3	26.4	80	85	84
Arizona	32.5	32.1	26.5	85	87	84
Utah	30.3	31.4	26.9	92	93	87
Nevada	32.3	30.6	29.5	91	94	92
Idaho	28.0	27.8	23.8	84	86	87
Washington	25.5	30.7	25.8	89	90	89
Oregon	37.5	34.8	31.4	92	93	90
California	24.7	28.7	25.2	84.0	88.6	86.5
Far Western	27.4	25.5	25.8	87.2	84.2	84.4
United States	27.4	25.5	25.8	87.2	84.2	84.4

EXPORTS FROM ATLANTIC PORTS.

The exports of breadstuffs, as compiled by George F. Stone, secretary of the Chicago Board of Trade, from the Atlantic ports during the two weeks ending Dec. 10, 1910, as compared with same weeks last year, have been as follows:

Articles.	For Week Ending		For Week Ending	
	Dec. 10	Dec. 13	Dec. 3	Dec. 6
	1910.	1909.	1910.	1909.
Wheat, bushels.....	1,844,000	2,711,000	1,558,000	2,521,000
Corn, bushels.....	281,000	839,000	235,000	642,000
Oats, bushels.....	2,000	17,000	7,000	13,000
Rye, bushels.....	11,000	14,000	14,000	37,000
Barley, bushels.....	244,900	226,800	234,700	239,600
Flour, barrels.....				

Toledo's first car of new corn arrived on November 14 from southern Indiana. It graded No. 4, with 22 per cent moisture.

Cost of carrying grain in Chicago elevators, including all charges, 5,000 bushel lots (approximately); Wheat, \$3.25 per day; corn, \$2.85 per day; oats, \$2.25 per day.

RECEIPTS AND SHIPMENTS.

Following are the receipts and shipments of grain etc., at leading receiving and shipping points in the United States for the month of November, 1910:

BALTIMORE—Reported by James B. Hessong, Secretary of the Chamber of Commerce.

Articles	Receipts		Shipments	
	1910	1909	1910	1909
Wheat, bushels.....	775,996	629,775	442,542	432,479
Corn, bushels.....	539,125	1,025,454	539,190	394,128
Oats, bushels.....	110,218	184,245	130	220
Barley, bushels.....	88,425	3,013		
Rye, bushels.....	3,743	78,559		
Timothy Seed, lbs.....	1,258	1,389	681	2,434
Clover Seed, lbs.....	5,243	5,553	959	1,597
Hay, tons.....	206,123	294,501	87,019	109,312
Flour, barrels.....				

CHICAGO—Reported by George F. Stone, Secretary of the Board of Trade.

Articles	Receipts		Shipments	
	1910	1909	1910	1909
Wheat, bushels.....	1,201,700	2,514,720	1,418,500	1,680,646
Corn, bushels.....	8,163,500	5,887,050	5,884,800	4,622,493
Oats, bushels.....	6,865,800	7,570,450	6,885,900	7,327,932
Barley, bushels.....	2,427,000	3,293,527	755,700	1,028,995
Rye, bushels.....	118,500	183,000	34,700	73,187
Timothy Seed, lbs.....	1,740,900	4,134,953	676,200	1,481,204
Clover Seed, lbs.....	884,900	241,789	243,900	110,928
Other Grass Seeds, lbs.....	2,546,600	5,130,900	1,211,300	3,810,419
Flax Seed, bushels.....	235,600	221,955	30,500	18,252
Broom Corn, lbs.....	3,094,800	1,763,685	3,727,500	2,187,299
Hay, tons.....	18,729	18,225	1,855	1,855
Flour, barrels.....	717,392	863,078	708,286	946,429

CINCINNATI—Reported by C. B. Murray, Superintendent of the Chamber of Commerce.

Articles	Receipts		Shipments	
	1910	1909	1910	1909
Wheat, bushels.....	516,279	284,845	414,566	275,152
Corn, bushels.....	498,775	643,010	444,458	262,796
Oats, bushels.....	474,450	552,602	349,628	441,076
Barley, bushels.....	83,000	123,050	2,122	550
Rye, bushels.....	43,154	68,663	16,638	44,343
Malt, bushels.....	179,170	106,523	27,000	17,200
Timothy Seed, bgs.....	1,785	6,480	2,452	2,791
Clover Seed, bgs.....	1,617	1,555	2,571	2,589
Other Grass Seed, bgs.....	6,232	22,116	15,244	14,638
Hay, tons.....	19,857	13,138	12,875	9,299
Flour, bbls.....	139,161	138,314	86,828	92,738

DULUTH—Reported by Chas. F. MacDonald, Secretary of the Board of Trade.

Articles	Receipts		Shipments	
	1910	1909	1910	1909
Wheat, bushels.....	4,032,673	10,816,591	4,746,840	14,409,299
Corn, bushels.....	72			
Oats, bushels.....	113,255	675,679	104,522	862,873
Barley, bushels.....	1,235,871	2,241,518	1,889,045	2,580,091
Rye, bushels.....	48,276	134,459	110,544	188,023
Flax Seed, bushels.....	1,457,358	4,515,234	1,507,025	3,041,668
Flour, bbls.....	686,560	868,750	921,310	983,200
Flour, bbls, Production.....	111,155	83,475		

KANSAS CITY, MO.—Reported by E. D. Bigelow, Secretary of Board of Trade.

Articles	Receipts		Shipments	
	1910	1909	1910	1909
Wheat, bushels.....	2,598,200	3,161,400	2,929,200	2,246,200
Corn, bushels.....	500,400	910,800	822,000	924,600
Oats, bushels.....	300,200	598,500	311,100	492,000
Barley, bushels.....	23,800	33,000	33,600	15,400
Rye, bushels.....	7,700	19,800	2,200	8,800
Flax Seed, bushels.....		1,000		2,000
Kaffir Corn, lbs.....	6,000,000	4,950,000	100,000	
Hay, tons.....	25,368	19,620	5,532	4,656
Flour, barrels.....	14,250	17,750	178,500	213,750

MILWAUKEE—Reported by H. A. Plumb, Secretary of the Chamber of Commerce.

Articles	Receipts		Shipments	
	1910	1909	1910	1909
Wheat, bushels.....	1,731,330	1,073,100	1,767,742	400,639
Corn, bushels.....	315,240	180,400	199,536	325,654
Oats, bushels.....	923,600	1,140,000	1,097,197	896,275
Barley, bushels.....	1,783,100	1,938,000	680,055	1,037,460
Rye, bushels.....	112,800	116,000	45,806	82,297
Flax Seed, bushels.....	14,400	115,540	12,000	
Hay, tons.....	2,020	2,940	88	
Flour, bbls.....	337,145	496,525	351,651	449,620

NEW YORK—Reported by H. Heinzer, Statistician of the Produce Exchange.

Articles	Receipts		Shipments	
	1910	1909	1910	1909
Wheat, bushels.....	3,203,100		2,450,681	
Corn, bushels.....	296,476		282,278	
Oats, bushels.....	2,334,325		42,028	
Barley, bushels.....	582,387		48,548	
Rye, bushels.....	29,900			
Timothy Seed, bgs.....			594	
Clover Seed, bgs.....			7,140	
Other Grass Seed, bgs.....	7,602			
Flax Seed, bushels.....	281,828			
Hay, bales.....	34,265		16,716	
Flour, bbls.....	845,388		406,393	

OMAHA—Reported by F. P. Manchester, Secretary of the Omaha Grain Exchange.

Articles	Receipts		Shipments	
	1910	1909	1910	1909
Wheat, bushels.....	855,600	741,600	490,000	538,000
Corn, bushels.....	445,200	355,300	503,000	722,000
Oats, bushels.....	710,600	870,400	661,500	882,000
Barley, bushels.....	106,400	101,000	32,000	58,000
Rye, bushels.....	28,600	43,000	23,000	25,000

PEORIA—Reported by John R. Loifgren, Secretary of the Board of Trade.

Articles	Receipts		Shipments	
	1910	1909	1910	1909
Wheat, bushels.....	87,000	86,805	90,000	53,000
Corn, bushels.....	1,361,652	1,305,141	720,526	850,942
Oats, bushels.....	549,138	518,146	845,280	627,400
Barley, bushels.....	405,300	356,652	119,176	
Rye, bushels.....	23,400	13,100	6,600	
Mill Feed, tons.....	2,890	4,226	5,970	7,376
Spirits and Liquors, bbls.....	10,923	11,423	63,376	48,565
Syrups and Glucose, bbls.....	7,700	10,750	8,749	7,950
Seeds, lbs.....	150,000	390,000	150,000	240,000
Broom Corn, lbs.....	258,000	270,000	292,400	225,000
Hay, tons.....	4,234	3,235	1,337	456
Flour, bbls.....	175,094	277,000	198,826	267,436

PHILADELPHIA—Reported by Frank E. Marshall, Secretary of the Commercial Exchange.

Articles	Receipts		Shipments	
	1910	1909	1910	1909
Wheat, bushels.....	1,164,651	2,442,594	880,453	2,015,442
Corn, bushels.....	151,308	212,547		76,557
Oats, bushels.....	640,294	420,057		
Barley, bushels.....	8,000	13,000		
Rye, bushels.....	7,200	800		
Timothy Seed, bgs.....	1,897	1,403		
Clover Seed, bgs.....	635			
Other Grass Seeds, bgs.....				
Flax Seed, bushels.....	9,600	271,600		
Hay, tons.....	8,536	7,327		
Flour, bbls.....	260,296	336,104	109,986	197,282

SAN FRANCISCO—Reported by Wm. B. Downes, Statistician of the Merchants' Exchange.

Articles	Receipts		Shipments	
	1910	1909	1910	1909
Wheat, cents.....	186.026		359	
Corn, cents.....	23.475		26.400	
Oats, cents.....	54.635		1.857	
Barley, cents.....	1,052.476		1,158.854	
Rye, cents.....	600			
Hay, tons.....	14.381		4.701	
Flour, bbls.....	67.771		22.536	



# ELEVATOR AND GRAIN NEWS

## ILLINOIS.

An elevator is being built at Mackinaw, Ill.

A new elevator will be erected at St. Joseph, Ill. The Zorn Grain Co. is erecting a corn crib near its elevator at Lilly, Ill.

The new Farmers' Elevator at Cornell, Ill., is fast nearing completion.

Fred Rose is having a larger engine installed in his elevator at Homer, Ill.

Noble Brothers of Foosland have leased the Ricketts Elevator at Fisher, Ill.

Young & Shiplett of Abingdon, Ill., have traded their elevator to Brooks & Lantz.

George W. Crawford of Pesotum, Ill., has purchased an elevator at Bondville, Ill.

George Huffaker has sold his interest in the elevator at Prouty, Ill., to Lewis & Twist.

The Argenta Grain Co. has been incorporated at Argenta, Ill., with a capital stock of \$20,000.

The new elevator at Meyers Station, Ill., will probably be ready for business by January 1.

A. D. Kaga has sold his elevator and grain business at Filson, Ill., to his son, D. C. Kaga and C. C. Gray.

The grain firm of Epler & Wilson at Albion, Ill., has dissolved by mutual consent, Mr. Epler continuing in the business.

Ed. Metzger is overhauling his elevator at Alexis, Ill., and at Gerlaw. He has given the contract to McAllister & O'Connor.

The Farmers' Grain Elevator Co. has purchased the O. M. Davidson Elevator at Bloomington, Ill., for a consideration of \$8,500.

The directors of the Farmers' Elevator Co. at Strawn, Ill., have decided to purchase an automatic scale for their elevator.

McAllister & O'Connor have a contract from J. E. Fray & Son for the installation of machinery in their new elevator at Prophetstown, Ill.

The Windy City Fuel Co., which was recently incorporated at Chicago with a capital stock of \$50,000, will deal in grain as a part of its business.

The C. A. Vincent Co. of Odell, Ill., has been incorporated by Albert G. Miller, William D. Bangs and L. G. Vincent, with a capital stock of \$15,000.

The Fisher Farmers' Grain & Coal Co. of Fisher, Ill., has been incorporated by L. D. Oliver, H. L. Sunderland and J. S. Teuscher, with a capital stock of \$10,000.

The farmers in the vicinity of Allentown and Morton, Ill., intend to erect an elevator midway between the two places. Work will probably begin in the spring.

The Wataga Farmers' Elevator Co. of Wataga, Ill., has been incorporated by E. P. Robson, J. E. Williamson and F. E. Alexander, with a capital stock of \$3,500.

The Manhattan Farmers' Grain Co. of Manhattan, Ill., has been incorporated with a capital stock of \$10,000, by Herbert J. Smith, Bernard Murphy and Daniel Cockle.

The Easton Farmers' Elevator Co. of Easton, Ill., was recently forced to close its plant owing to the bad condition of its affairs. It is now doing business again however.

The elevator at Harness, Ill., owned by John Weimer, has been equipped with a Safety Ball Bearing Man-lift manufactured by the B. S. Constant Co. of Bloomington, Ill.

The Highland F. M. B. A. Elevator & Lumber Co. of Highland, Ill., has been incorporated by William Reinhardt, Joseph Bushmann and Albert Kleiner, with a capital stock of \$40,000.

The Toluca Farmers' Elevator Co., composed of farmers near Toluca, Ill., has been incorporated with a capital stock of \$10,000, for the purpose of erecting an elevator at that place.

The Farmers' Elevator Co., of Emden, Ill., has purchased the two elevators belonging to E. Verry, of Armington, one of which is at Richmond, Ill., and the other at Burt Crossing, for a consideration of \$11,650.

The farmers around Victoria, Ill., have purchased the Sellers Elevator instead of erecting one as at first planned. The price paid was \$7,750 and possession will be given December 20. Chat Soenberger, P. A. McDowell, O. E. Peterson, Fred Becker, Charles Hedstrom and Ira Bulson acted as incorporators for the newly formed company, which is known as the Victoria Farmers' Elevator Co.

The Aldrich Grain Co. is installing a 50-horse-power gasoline engine in its elevator at McLean, Ill., in place of the hundred horse-power steam engine, which has been in use for over forty years.

Emerson Hartsock of Lane, Ill., recently sold his elevator to William West of Washburn, who took possession immediately. W. T. Lane, who has leased the property till July, will continue to run the business.

The Holzman-Bennett Grain Co. of Grant Park, Ill., is equipping its new elevator with a Constant Ball-Bearing Safety Man-lift. The contract is in the hands of the Burrell Engineering & Construction Co. of Chicago.

The stockholders of the Tucker Coal & Grain Co., of Tucker, Ill., near Bourbonnais, have sold the business of their elevator, which burned several months ago, to Risser & Rollins of Kankakee. The new owners will rebuild the plant.

Schultz-Baujan & Co. of Beardstown, Ill., have given the contract to the Burrell Engineering & Construction Co. of Chicago, for the installation of a Constant No. 6 Cup Discharge, a U. S. Corn Sheller, B. S. C. Chain Feeders and a 60-inch Safety Ball Bearing Man-lift in its elevator.

## MINNESOTA AND WISCONSIN.

The new elevator at Hayden, Minn., has been completed.

Charles Webster will build an elevator at Madison, Minn.

W. F. Markham has rented an elevator at Le Sueur, Minn.

The farmers are building an addition to their elevator at Roberts, Wis.

The Pacific Elevator Co. is building an addition to its elevator at North Redwood, Minn.

Kelso & Co., grain dealers of Minneapolis, are winding up their affairs and will go out of business.

The Farmers' Elevator Co. at St. Hilaire, Minn., has appointed A. A. Reed manager for the coming year.

The working house of the Calumet "A" Elevator at Minneapolis, which burned recently, is being rebuilt.

A new elevator has been erected at Owatonna, Minn., by the Owatonna Farmers' Elevator & Mercantile Co.

The Farmers' Elevator Co., of Kenyon, Minn., recently decided to increase its capital stock from \$5,000 to \$30,000.

At Beaver, Minn., the Hubbard-Palmer Elevator Co. is repairing the damage done when its elevator collapsed some time ago.

Charles Johnson has purchased the interests of Thomas Dukelow in the Chippewa Fuel & Grain Co., of Chippewa Falls, Wis.

Julius Klueiter is erecting a large warehouse at Madison, Wis., at a cost of \$6,000. The building is to be of brick and concrete.

The Northwestern Elevator Co. has placed a new foundation under its house at Louisburg, Minn., besides otherwise improving the place.

The G. E. Gee Grain Co. of Minneapolis, Minn., has appointed W. F. Hyde to take charge of its receiving and shipping department.

The business men and farmers have purchased the elevator at Carver, Minn., as W. H. Scott, the owner, refused to buy any more wheat.

The Monarch Elevator Co. has completed extensive improvements on its elevator at Frazee, Minn., including a new sacker, cement pits and driveway.

A committee of several members of the Chamber of Commerce met in Milwaukee, Wis., recently to consider the project of erecting a large elevator in that city.

The Renville Farmers' Elevator Co. of Renville, Minn., has installed a Safety Ball Bearing Man-lift manufactured by the B. S. Constant Co. of Bloomington, Ill., in its elevator.

At a meeting of the American Society of Equity for the district of North Dakota, held at Carrington, the establishment of terminal elevators at Superior and Minneapolis was again recommended by the organization.

Elevator "B" of the Chicago, Milwaukee & St. Paul Railroad at Minneapolis, Minn., is being dismantled as the railroad probably will use the site for track purposes. The house has a capacity of 1,500,000, and is constructed of wood.

At a recent meeting of the stockholders of the Farmers' Elevator Co. of Sleepy Eye, Minn., on November 19, it was unanimously decided to renew the period of incorporation for another 20 years from December 2, 1910. The company started business on December 2, 1890.

The Andrews Grain Co. has closed its elevator at Deer Creek, Minn., and Wm. Holthausen has rented it as a storeroom for grain.

The Milwaukee Grain & Feed Co. has been granted the special privilege of building some grain bins under the side walk at its plant in Milwaukee, Wis. In return for the favor, William Wallace, the president, gave \$200 to the Association of Public Playgrounds and Social Education.

## IOWA.

The new elevator at Dakota City, Iowa, is fast nearing completion.

An elevator will be erected at Cumberland, Iowa, by the Turner Brothers.

A new elevator will be erected by the Turner Brothers at Sciola, Iowa.

The Atlas Elevator Co. is building a 12,000 bushel elevator at Hinton, Iowa.

Peter Jensen has purchased the Iowa Central Elevator at Eldora, Iowa.

A. S. Marshall has purchased the G. W. Wyant Elevator at Malvern, Iowa.

E. A. Bowles of Grundy Center has purchased the Farmers' Elevator at Wellsburg, Iowa.

The elevator being erected at Milford, Iowa, for J. A. Campbell & Son, is almost completed.

The Neola Elevator Co. is moving its white elevator at Kenwood, Iowa, nearer to its red one.

The new elevator being erected at Milford, Iowa, by J. A. Campbell & Son is practically completed.

W. F. Blair is building a large elevator at Ewart, Iowa, which will have a capacity of 25,000 bushels.

The Gault Brothers are rebuilding their elevator at Cromwell, Iowa, which was destroyed by fire this fall.

The Terwilliger Bros., of Minneapolis, Minn., have purchased the Reliance Elevator at Rock Valley, Iowa.

The Diamond Grain Co. of Fernald, Iowa, has installed a new drive and cup belt in its elevator at that place.

Peter Johnson has purchased the Iowa Central Elevator at Iowa Falls, Iowa, from William Heese and Fred Wing.

O. T. Hulburd & Co. have disposed of their elevator and grain business at Osceola, Iowa, to W. B. Curnes and J. W. Eddy.

The Western Elevator Co., of Winona, Minn., will rebuild its elevator at Nashua, Iowa. The cost of the structure will be \$5,000, not including the machinery.

The Chalmers Elevator at Washington, Iowa, which is practically completed, has a capacity of 30,000 bushels. The present house replaces the one which was struck by lightning this fall.

At the annual meeting of the stockholders of the Sioux City Terminal Elevator Co., at Sioux City, Iowa, it was found that the indebtedness of the company had been reduced to \$1,100. J. P. Martin retired as a member of the board and J. C. Kelly was appointed to succeed him. The officers elected were as follows: John Hornick, president; H. J. Hutton, vice-president; S. J. Johnson, secretary; L. L. Kellogg, treasurer; directors, L. L. Kellogg, J. E. Blenkiron, J. C. Kelly, H. J. Hutton, O. J. Moore, S. J. Johnson, W. B. Palmer, John McHugh, W. H. Beck, John Hornick and E. W. Rice.

## THE DAKOTAS.

The contract has been let for two elevators at Agar, S. D.

An elevator will be erected at Gladstone, N. D., in the spring.

Henry Dunbar is erecting an elevator on his farm near Stratford, S. D.

Two elevators will probably be erected in Onida, S. D., by A. N. Clause.

The Case Elevator, at McVile, N. D., has been leased by John E. Cary.

The Western Lumber & Grain Co. is erecting a new elevator at Regent, N. D.

The elevator at Big Stone, S. D., will be run in the future by a 15-horse-power electric motor.

Salem, S. D., will have a new elevator next spring when the one recently burned will be rebuilt.

At Parker, S. D., the Farmers' Elevator Co. has been incorporated with a capital stock of \$10,000.

Frank Smith, owner of the Ostroot Elevator at Madison, S. D., recently sold his elevator to C. R. Hoesswill.

The Crocker Farmers' Elevator Co. has been incorporated at Crocker, S. D., with a capital stock of \$15,000.

The Farmers' Elevator Co. is building an addition to its elevator at Crandall, S. D., which will be used as a storage room for flour and feed.

The newly organized Farmers' Elevator Co. at Stickney, S. D., purchased the elevator of O. J. Aaker for \$4,050 and took possession December 1.



The A. H. Betts Elevator Co. has erected an elevator at a new town in South Dakota, six miles west of Mitchell. The house has a capacity of 25,000 bushels.

Wait and Dana are wrecking one of their elevators at Armour, S. D., and will move it to Starr, a new town on the Milwaukee Railroad, between Parkston and Ethan.

At a recent meeting of those interested in the new elevator at Scranton, N. D., the following officers were elected: George Piper, president; W. A. Shaw, treasurer, and L. C. Ofstedahl, manager.

#### EASTERN.

A warehouse is being erected at Bloomsburg, Pa., by the White Milling Co.

The new elevator being erected at Upton, Mass., for William Knowlton & Sons is fast nearing completion.

The new floating grain dryer for the Erie Elevator at New York City, N. Y., has been practically completed.

The Mystic Grain Co. intends to rebuild its elevator at Mystic, Conn., which was recently destroyed by fire.

I. N. Boucher of Dedham, Mass., has purchased the business of the Somersworth Grain Co. of Somersworth, N. H.

J. Loring & Co. are building a new grain elevator at Watertown, Mass., on the site of the old building, which was destroyed by fire.

A grain dryer has been erected at the end of the Grand Trunk Elevator in Portland, Me., which is fifty feet high and made of concrete.

Lewis N. Kellogg has equipped his plant at Charlotte, Vt., with a 39-inch "Safety" Man-lift, manufactured by the B. S. Constant Co. of Bloomington, Ill.

#### MISSOURI, KANSAS AND NEBRASKA.

An elevator has been erected at Froid, Nebr.

The Farmers' Elevator at Neligh, Nebr., is completed.

The Nye-Schneider-Fowler Co. will rebuild its elevator at Superior, Nebr.

The Farmers' Grain Co. of Ord, Nebr., has elected George Pöbler as manager.

A new gasoline engine is being installed in the Farmers' Elevator at Elyria, Nebr.

T. B. Janasek is building a better foundation under his elevator at Munden, Kan.

An addition has been built to the elevator at Ravenna, Nebr., by the Ravenna Mills Co.

The M. T. Shepherdson Co. has changed the name of its Omaha firm to the Shepherdson Grain Co.

The Victoria Elevator Co., of Victoria, Mo., has been incorporated with a capital stock of \$8,000.

C. O. Morgan, manager of the Lincoln Grain Co., is making repairs on the elevator at Murdock, Nebr.

The A. R. Clark Grain Co. has come under the control of the W. S. Martin Grain Co. at Wichita, Kan.

The new elevator at Berks, Nebr., has been completed and Mr. Peters, the manager, is taking in grain.

The grain damaged in the fire at the Blair Elevator at Atchison, Kan., has been shipped to Minneapolis.

H. R. Sheldon has sold his elevator and grain business at Seneca, Kan., to Thompson, Burberry & Collins.

H. L. Stover has purchased the membership of Eugene Kelly in the Kelly Brothers Grain Co. of Wichita, Kan.

The Western Grain Co. of Wichita, Kan., has been purchased by H. F. Stover. C. B. Gaunt was the former owner.

Depew Head has purchased the interest of Charles Dorman in the Southern Kansas Grain Co. of Wichita, Kan.

The Missouri Pacific Elevator at Lawrence, Nebr., has been repaired and will soon be put in operation by J. A. Taylor.

Work on the elevator at Wilber, Nebr., which is being rebuilt, is finished. The house is owned by the Farmers' Elevator Co.

Frank Merton is building a 10,000-bushel elevator on his farm near Great Bend, Kan., which will be used as a farmers' elevator.

Plans are being made to move the Omaha Elevator at Kearney, Nebr., to a new site one block south of its present location.

A movement is on foot to grant a franchise to the Farmers' Mill & Elevator Co. at Ponca, Nebr., to furnish electricity to the city.

Rats under the foundation of the Fonda Bros. Elevator at Genoa, Nebr., caused it to settle and a force of men are repairing the damage.

The Gresham Grain Co. has purchased the elevator at Gresham, Nebr., of B. F. Morehouse and has put L. H. Aden, of York, in charge. The com-

pany was recently incorporated with a capital stock of \$15,000.

The Duff Grain Co. is rebuilding its corn cribs at Ithaca, Nebr.

Louis E. Mann of Osmond, Nebr., will erect an elevator at Creighton.

H. S. Freeman, cashier of the First National Bank of Lincoln, Nebr., has purchased the building of the Central Granaries Co. of that place for \$22,500.

G. F. Hughes of Hornick, Iowa, has purchased the grain business of P. D. Corell of Plainview, Nebr., and will place H. R. Greer of Hampton, Nebr., in charge.

The Missouri Pacific Railroad Co. has decided to lay a sidetrack to the Manley Farmers' Elevator Co.'s elevator at Manley, Nebr., without having the case passed on by the court.

Articles of incorporation have been filed for the Colon Grain & Stock Co. of Colon, Nebr., by Charles F. Davis, Anton Binkner, Jr., A. H. Blair and others. The capital stock is \$10,000.

The preliminary steps have been taken in organizing the Winnebago Farmers' Co-operative Grain Co. of Winnebago, Nebr. The company was organized by D. D. Ross, Bert Killmer, J. D. Gill, John Morgan and James Morgan. An elevator will be leased to take care of this winter's grain.

#### WESTERN.

A new elevator is being erected at Picabo, Idaho.

W. I. Saxton has closed his elevator at Culbertson, Mont., and taken charge of his house at Mondak.

Kennedy & Rosenbaum, of Shaniko, Ore., have dissolved partnership, A. D. Kennedy continuing the business.

Two elevators, each having a capacity of 40,000 bushels, have been erected at Trenton, Utah, within the past few months.

The Western Elevator and Development Co. has been incorporated at Salt Lake City, Utah, with a capital stock of \$8,000.

The Seattle Grain Co. has completed its new warehouse at Espanola, Wash., which takes the place of the two houses destroyed by fire.

L. P. Callison has purchased a site in South Aberdeen, Wash., on which he intends to erect an elevator. The land comprises 500 feet of water front and cost \$10,000.

#### CANADIAN.

The Oxbow Elevator Co. of Oxbow, Sask., has been dissolved.

The Alberta Grain Co. is building a 30,000-bushel elevator at Botha, Alta.

The Homewood Farmers' Elevator Co., Ltd., of Homewood, Man., has been dissolved.

Chicago and Duluth interests may erect a 5,000-bushel elevator at Goderich, Ont.

The Grand Trunk Pacific Elevator Co., Ltd., has been licensed to do business in Ontario.

The Western Terminal Elevator Co. has been licensed to carry on business in Manitoba.

Work is proceeding on the new warehouse at St. John, N. B., which is located on the water front.

Reeve Cummings has built a concrete grain elevator in connection with his mill at Eastview, Ont.

The half-million bushel concrete annex to the Transit Elevator Co.'s plant at Goderich, Ont., has been completed.

J. E. Pelletier, of Fraserville, Que., and Joseph Ronleau, of Limolou, Que., have incorporated in Quebec the La Compagnie de Farines with a capital stock of \$49,500.

The Grand Trunk Pacific Elevator Co.'s elevator at Tiffin, Ont., made a record during the past 20 months by handling 13,804,000 bushels of grain, the largest amount per day being 527,000 bushels in 22 hours.

The Boston Towboat Co. wish to sell two large floating grain elevators to the city of St. John, N. B., as the change in the harbor facilities of the Boston & Maine and Boston & Albany Railways has thrown them on the market.

At a recent meeting of the Reston Farmers' Elevator Co., Ltd., held November 17 at Reston, Man., the action of the board in providing for the transfer of business interests and property of the company to the government was approved.

The Alexander Brown Milling & Elevator Co. intends to enlarge its business by the erection of a million-bushel elevator and a 6,000-barrel mill at Toronto, Ont., which will cost about \$550,000. The increase is due to the deepening of the Welland Canal.

The appeal made by the Grand Trunk Pacific Elevator Co. against the taxation of its terminal elevator at Fort William, Man., went against the company which will be forced to pay \$23,000 to the city. The case was the result of the city's finding

out that the elevator was not built by and did not belong to the G. T. P. Had it been so built it would have been exempt from taxation in accordance with a franchise of the railroad.

The name of the Caron Farmers' Elevator Co., Ltd., of Caron, Sask., has been changed to the Caron Farmers' Elevator and Tracking Co., Ltd.

The Grand Trunk Pacific Elevator Co. intends to construct three large piers at West Fort William, Man., along which it will erect a series of half a dozen elevators. The first of these has been completed. It has a capacity of three and a quarter million bushels and is of fireproof construction as will be all the rest.

#### SOUTHERN AND SOUTHWESTERN.

The steel grain conveyor from the new elevator at Texas City, Texas, to the slip is almost completed.

The Marsh Commission Co. will equip its elevator at Pine Bluff, Ark., with two Hall Non-chokable Boots.

E. A. Butt, J. A. Camp, E. F. Riles and others have incorporated the Paoli Grain Elevator Co. at Paoli, Okla., with a capital stock of \$5,000.

#### OHIO, INDIANA AND MICHIGAN.

The Burkeholder Co. is erecting an elevator at Ada, Ohio.

Hoefster & Dongan are building an elevator at Grant, Ohio.

J. Keller & Co. are planning to erect an elevator at Kendallville, Ind.

The Goshen Elevator Co. intends to erect an elevator at Goshen, Ind.

A new elevator has been built at Emery Chapel, Ohio, by G. A. Collier.

J. M. Hackman & Son have built an elevator at North Hampton, Ohio.

John Wren has put a concrete basement under his elevator at Deunquat, Ohio.

The grain firm of Epler & Wilson at Albion, Ind., has dissolved by mutual consent.

The Jonesville Grain Co. has taken over the elevator of J. H. Fletcher at Jonesville, Ohio.

All the machinery in the Leslie Elevator Co.'s elevator at Leslie, Mich., is now operated by electricity.

The new Kent Elevator at Kalamazoo, Mich., is being finished as fast as possible before cold weather sets in.

David Metzger has bought back the elevator at Gessie, Ind., which he sold three years ago to A. K. Peterson.

Two concrete grain bins have been erected for the I. Leisy Brewing Co. at Cleveland, Ohio, at a cost of \$8,000.

The Laporte Elevator Co. has opened the elevator at Laporte, Ind., which it recently purchased from J. B. Rupel & Co.

The new elevator built by Wenrick and Mote Hawkins, near Mud Creek Bridge, Greenville, Ohio, has been completed.

Samuel Aungst and Artie Aungst have purchased an elevator at Fayette, Ohio, and will take possession February 1.

The Farmers' Elevator & Coal Co. of Constantine, Mich., has filed articles of incorporation, with a capital stock of \$8,000.

The Crabbs-Reynolds-Taylor Co. intends to erect a larger elevator at Cherry Grove, Ind., in place of the one now in use.

W. H. Small & Co. are installing three B. S. Constant Patented Chain Drag Feeders in their elevator at Evansville, Ind.

Howard Townsend is making extensive improvements on his elevator at Urbana, Ohio. A new gas engine will be installed.

Isaac W. Peterson and L. E. Harper will be proprietors of the new elevator which is being established at Spring Valley, Ohio.

The 200 barrel mill at Wanatah, Ind., is being turned into an elevator as Edward Mitzner has discontinued the milling business.

The modern concrete elevator at Toledo, Ohio, which is being erected by W. H. Haskell & Co., will be in operation by the first of the year.

The Igleheart Brothers of Evansville, Ind., are increasing the capacity of their elevator up to 150,000 bushels, by the erection of some concrete tanks.

The half-interest of the late F. W. Baum of Duvall in the elevator at Groveport, Ohio, has been sold to Albert Herr, owner of the other half interest, for \$6,500.

The L. S. & M. S. Ry. is enlarging its elevator at Indiana Harbor, Ind., by adding three tile tanks for handling dried grains. The Barnett & Record Co.



of Minneapolis, has the contract for the tanks which will have a capacity of 25,000 bushels.

A. E. Deming of Cleveland has purchased the Interstate Grain Co.'s plant in Fairmont, Ohio, a suburb of Cincinnati, for a consideration of \$22,000.

Col. Charles Groce leased the grain elevator at Ritts Crossing, four miles north of Circleville, Ohio, for a term of five years and took possession December 1.

The Fiatt Mill & Elevator Co. of Fiatt, Ohio, has been incorporated with a capital stock of \$25,000, by W. M. Page, L. E. Maddox, C. McCauley and A. T. McDowell.

I. J. Biesecker, J. M. Chizum and C. E. Triplett are the directors of the Farmers' Elevator Co. recently incorporated at Morocco, Ind., with a capital stock of \$20,000.

Josiah D. Kelly, Frank Krohn, Lyman Conrad, W. H. Battles and J. F. Myers have incorporated the Farmers' Grain & Seed Co. at Grelton, Ohio, with a capital stock of \$8,000.

The Xenia Grain Co. has been incorporated at Xenia, Ohio, by G. N. Perrill, A. V. Perrill, J. T. Perrill, C. H. Little and A. L. Little. The company will take over the Miami Grain Co.'s business and plant.

The capital stock of the Goodland Grain Co. of Goodland, Ind., a newly organized company, is \$50,000. W. E. Rich, J. D. Rich and F. C. Rich are the directors. The company intends to build an elevator.

The Weller Manufacturing Co., of Chicago, has installed a No. 2 U. S. Corn Sheller, manufactured by the B. S. Constant Co. of Bloomington, Ill., in the elevator of the Woodbury-Elliott Grain Co., at Radley, Ind.

The Mollett Grain Co. of McClure, Ohio, has equipped its elevator with a water tight elevator boot manufactured by the B. S. Constant Co. of Bloomington, Ill. C. A. Drake of Flora, Ind., has the contract.

The B. S. Constant Co. of Bloomington, Ill., has equipped the elevator of the Lochiel Farmers' Elevator Co. of Lochiel, Ind., with a Constant Ball Bearing Man-lift. The house is also undergoing some other repairs.

The elevator of the Farmers' Grain & Supply Co. of Camden, Ind., has been equipped with three B. S. Constant Chain Drags, three Self-Locking Rail Dumps and a Safety Man-lift by the Burrell Engineering & Construction Co. of Chicago.

[For the "American Elevator and Grain Trade."]

## ST. LOUIS AND MIDDLE WEST GRAIN AND FEED NOTES.

BY L. C. BREED.

Though the national and state political campaigns have passed by, "politics" constitute a live topic on 'Change through the introduction into this conservative and time-honored organization of the spirit of insurgency. In the wider field of controversy, the aforesaid spirit is claimed to represent progress, while on the other hand on 'Change the slogan of its supporters is "Reform." And the specific brand is that of largely curtailing the current expenses and thus admit of reducing the annual dues. In order to bring this about, the insurgents propose to enter the field with an opposition ticket, since they are of the opinion that the regulars are not inclined to make any changes in the four departments now existing and conducting the affairs of the organization or contemplate reducing expenses.

The slate which it is likely the regulars will make up will place the name of Nat L. Moffit, the present vice-president, at the head. Chris. Bernet, the present second vice-president, will probably be run at the caucus for nomination as first vice-president, and John L. Messmore, now one of the directors, is prominently named for nomination as second vice-president. For the office of directors Wilbur B. Christian and F. W. Teele are mentioned. Five vacancies have to be filled on the board of directors, but of these, if the regular custom is followed, the retiring president will constitute one. The caucus will be held near the close of the month. The annual election takes place January 4.

The insurgent movement was started this year by R. W. Boisseller, and a petition asking James P. Newell to allow his name to be used at the caucus as a candidate for the presidency is being circulated.

For the past five years the candidate for the presidency worked up from director to second vice-president; then was carried to first vice-president. During this period each year only one ticket was in the field.

The dues for 1910 have been fixed by the board at \$50, the same as for the present year. The revenues last year were over \$92,000. One-fifth of this amount went to the Traffic Bureau, while the Publicity Bureau appropriations, the Department

of Weights and the Statistical Department call for a share of the revenues.

The board of directors have appointed Nat L. Moffitt a delegate to the Executive Committee of the Council of N. A. Grain Exchanges to meet in Chicago, December 12.

William P. Kennett and John L. Messmore were appointed delegates from the Exchange to the National Rivers and Harbors Congress, which met at Washington, D. C., December 7-9.

J. C. Lincoln, commissioner of the Traffic Bureau, was authorized to attend a meeting in Washington early in December, which considered a treaty relating to collisions at sea, which the board believes will tend to increase the cost of marine insurance.

The delegation from the Exchange to the corn exposition at Des Moines, Ia., was as follows: M. W. Cochran, C. L. Wright, Edward J. Greve, R. J. Pendleton, E. F. Daly, H. F. Ketchum, James D. Parrott, Erich Picker, Geo. F. Powell, Bert Ball, Geo. C. Martin, Jr., Ban P. Corneli, John G. Ballard and H. H. Savage.

A corn judging contest will be had between the members of the Chicago Board of Trade and members of the Merchants' Exchange. This is to show grain dealers who attend the exposition the methods of judging corn. The following committee was appointed to represent Exchange: M. W. Cochran, C. L. Wright, Geo. C. Martin, Jr., Geo. F. Powell and James B. Parrott.

James Holland & Co. of St. Louis have taken over the flour and commission business of James Holland and incorporated under the laws of Missouri with a capital stock of \$5,000, fully paid. The incorporators are: James Holland, P. D. Hammett and Richard C. Spackler. The company has leased the Victoria warehouse for storage purposes.

The large corn crops of several of the southern states is cutting down the demand for corn from the St. Louis market. Even in Louisiana cotton is no longer king as corn now exceeds in value any crop raised in the state and approaches an economic revolution in its effects.

### IOWA ITEMS.

E. A. Bowles of Grundy Center, Ia., has purchased the Farmers' elevator in Wellsburg, Ia.

William Heese and Fred Winn have sold the Iowa Central elevator at Iowa Falls, Ia., to Peter Johnson.

F. J. Olson, Ames, Ia., intends to erect a new building for his seed business.

Gault Bros., Cromwell, Ia., are rebuilding their elevator which was burned this fall and expect to have it completed before New Year's.

The grain elevator belonging to B. L. Pyle, Marietta, Ia., was destroyed by fire recently. The loss will aggregate \$2,000, partially covered by insurance.

### ILLINOIS ITEMS.

The grist mill belonging to Trout Bros., McLeansboro, Ill., was recently destroyed by fire.

The elevator at Elkhart, owned by Henry Horn, Duquoin, Ill., was destroyed by fire December 5. The loss was nearly \$10,000.

While N. Hilton, proprietor of the grain elevator at Joliet, Ill., was absent from his office a new employee by the name of Raymond Ogden robbed the safe of \$197. By prompt action the thief was caught in the town of Wilmington where he had gone by railroad.

Illinois grain dealers are quite proud of the fact that the corn crop of the year places the state at the head of the list of corn growing states of the Union.

The Wataga Farmers' Elevator Company of Wataga, Ill., has been incorporated. Capital stock \$3,500; incorporators: E. P. Robson, J. E. Williamson and F. E. Alexander.

The safe of C. R. Aden & Co., proprietors of the elevator at Carlinville, Ill., was badly damaged in an attempt to break into it. As no money was in it, the thief got nothing for his pains.

The Victoria Farmers' Elevator Company, Victoria, Ill., has been incorporated. Capital stock, \$8,000. Incorporators: P. A. McDowell, G. H. Becker and C. O. Hedstrom.

The National Oats Company of East St. Louis, Ill., has been incorporated. Capital stock, \$300,000. Incorporators: Joseph R. Matthews, John C. Reid and C. C. Collins.

### KANSAS ITEMS.

The business of the Western Grain Company, Wichita, Kas., has been purchased by H. F. Stover. The Western Grain Company was owned by C. B. Gaunt.

The leading citizens of Junction City, Kas., are arranging to erect an alfalfa mill, of about 20 tons' daily capacity, at a cost of about \$15,000.

The elevator and grain business owned by H. R. Sheldon, Seneca, Kas., has been purchased by a firm composed of W. B. Thompson, Thomas Burberry and E. M. Collins.

### ARKANSAS ITEMS.

The warehouse of the Overstreet Grain Company, Little Rock, Ark., was recently destroyed by fire causing a loss of \$16,000, which was covered by insurance.

The T. H. Bunch elevator, near the Rock Island

station, Little Rock, Ark., was recently destroyed by fire causing a loss of about \$5,000 on the building and of \$10,000 on grain, hay and other property.

The Jackson Oil Mills' hull house, Jackson, Miss., of which W. B. Gowdy is manager, was recently destroyed by fire. The loss is estimated at \$15,000.

### NEBRASKA ITEMS.

The Farmers' Elevator Company, Wilbur, Neb., is rebuilding the elevator. Several weeks will be required for the job.

The elevator and stock barn owned by Johnson & Graham at Ames, Neb., were recently destroyed by fire, causing a loss of about \$75,000, with \$35,000 insurance.

### OKLAHOMA ITEMS.

The elevator owned by the El Reno Elevator Company, Geary, Okla., was destroyed by fire November 29. The loss was about \$10,000.

The Verden Alfalfa Milling Company, of Verden, Okla., has been incorporated. Capital stock, \$15,000. The directors are: J. N. Jones, Charles Tipple, J. M. Phillips, H. J. Gaskill and B. F. Wilson.

[Special Correspondence.]

## THE NEWS FROM TOLEDO AND OHIO.

BY E. F. BAKER.

New corn has been coming in in fair volume during the past few days, and it is expected that receipts will materially increase from this time on. Receipts have been somewhat curtailed by the poor drying weather but this condition having changed, a noticeable improvement is apparent. The quality of Ohio corn is not at all bad for this time of year and shows a marked improvement over that of last year. Nineteen cars of contract corn were included in the receipts of the past week, which amounted to 105 cars. Included in the list were twenty-four cars of No. 4 yellow, twelve cars of No. 3 white, twenty-five cars of No. 4 white and twenty-three cars of sample. Receipts of the past week have aggregated 114,200 bushels, but a heavy Eastern demand has held the local supply down to a minimum. Shipments during the same period were 83,200 bushels. The official report of the State Board of Agriculture estimates the total Ohio corn crop at 105,512,245 bushels, an average of 34 bushels per acre, but this estimate is considerably below the Government report. Cash corn is now selling at 49 cents, December at 48½ cents, May at 49½ cents and July at 50½ cents.

Toledo wheat stocks decreased last week 68,564 bushels, to a total of 1,562,675 bushels. Export business is altogether out of the question, the demand coming exclusively from the milling interests. Most of the mills are well supplied and trade in wheat has been lethargic. Receipts this week amounted to about 30,000 bushels with shipments of 16,000 bushels. Wheat qualities have seldom, if ever, been better than this year and there is general satisfaction from millers on all sides. Cash wheat is now moving at 96½ cents, December the same, and May is quoted at \$1.00½. Some damage is reported to growing wheat due to the Hessian fly and white grub worm, but it has been very limited in area and plants for the most part are in splendid condition. A decline of about 8 per cent is estimated in the condition of growing wheat, as compared with estimates of Nov. 1. It ranks 94 per cent of an average condition at this season.

There has been a live Eastern demand for oats, and dealers here have carried on a fair business for some time. Shipments during the past week have amounted to 48,000 bushels, with receipts of 54,000 bushels. Heavy local consumption and the brisk outside demand are responsible for the continuous decrease in the local supply which last week was reduced 35,460 bushels to a total of 303,973 bushels. The coming of the holiday season and the period of taxpaying has brought a fair movement from first hand which will probably acute in some measure immediately after the first of the year.

### VARIOUS NEWS ITEMS.

The Farmers' Grain & Seed Co. of Grelton, O., has been incorporated with a capital stock of \$8,000 by Josiah D. Kelly, Frank Krohn, Lyman Conrad, Wm. H. Battels and J. Frank Myers. The concern will buy and sell grain at Grelton.

One of the last late cargoes of the season arrived at the East Side Iron Elevator last week, where it unloaded 150,000 bushels of flax and proceeded to Buffalo with 70,000 bushels of barley.

The new corn dryers recently installed at the East Side Iron elevator are doing satisfactory work and proving a great convenience to local grain buyers, who are charged a reasonably graduated scale of rates.

Charles W. Mollett of the Mollett Grain Co., which recently opened offices in the Produce Exchange Building, has made application for membership in the Toledo Produce Exchange.

The fourth annual National Corn Exposition will be held at Columbus on January 30 to February 11. The Ohio Corn Improvement Association will be in session at the same place, February 2-4. Toledo



grain interests will be well represented at both meetings.

A banner yield of corn is reported by F. S. Dailey, residing near North Baltimore, who cribbed 3,200 bushels from 37 acres. The highest single acre produced 91 bushels and the average was  $81\frac{1}{2}$  bushels.

A delegation of Toledo grain and milling men attended the convention of the Northwestern Ohio Hay and Grain Association at Lima, O., this week. Among those who were present from Toledo were Fred Mayer, A. Mennel and Abner Gifteau.

C. S. Coup, president and general manager of the Northwestern Elevator & Mill Co., has returned from an extensive trip along the Atlantic seaboard. He reports stocks in that section normal and that the buying sentiment has begun to gain ground.

The National Milling Co. of Toledo has received its fifth and last cargo of spring wheat during the season from Duluth. The last consignment amounted to 107,000 bushels. There has been a growing demand for spring wheat among Ohio millers.

The Miami Maize Co., which for many years has conducted a prosperous business in Toledo, will surrender its charter and go out of business in the near future. A meeting of the stockholders has been called for January 6 for this purpose.

The new concrete elevator now being erected by W. L. Haskell & Co., at Toledo, is nearing completion, and will be in operation by the first of the new year. It is one of the most modern of its kind in this section.

A pleasant surprise came to each office and warehouse employe of W. H. Morehouse & Co., Toledo, in the shape of a fine Thanksgiving turkey with the compliments of the management.

Considerable mouldy corn is reported in Wyandotte county. Farmers in their anxiety to get the ground ready for wheat cut their corn too early, with bad results.

An appropriation of \$140,000 or \$30,000 more than last year's appropriation, will be asked of the Ohio State Legislature by the state board of agriculture. Increase is asked because of the slump in the state fair receipts. Of the amount appropriated it is proposed to use \$50,000 in the encouragement of agriculture, \$35,000 in the suppression of diseases among live stock, \$15,000 for buildings on the new serum farm, \$10,000 for improvements at the state fair grounds and \$25,000 for new buildings.

F. O. Paddock, of the Paddock-Hodge Co., states that prospects of export business from this market are far from good. While American prices are lower than they were, there is still an impassible gulf between quotations here and Liverpool.

Toledo, Dec. 10.

The Farmers' Elevator Co. at Neligh, Nebr., paid 8% on its last year's business.

The Farmers' Elevator Co. of George, Ia., has paid a dividend of 80 per cent on stock of \$10,250.

The Farmers' Elevator Co. at Cortland, Neb., during the nine months ended with October handled 37,009 bus. of wheat, 24,220 of corn and 16,861 of oats.

President John Wade has appointed a committee to have charge of the entertainment of those attending the convention of the South Dakota Grain Dealers' Association, which will meet in Aberdeen in February.

Kansas farmers, where lands are infested with chinch bugs have been making a sharp raid on the pest, under the direction of Dr. T. J. Headless, state entomologist, by burning all the bunch grain of the neighborhood.

Sec'y Dillen has published a new edition of the "Official Directory of the Regular Grain Dealers of Indiana," corrected to November 1. The price is \$1. The secretary's address is M. T. Dillen, Indianapolis, Ind.

The La Riviere Farmers' Elevator Co., Limited, Manitoba, by a special resolution passed by the shareholders has disposed of their elevator and will wind up the affairs of the company, apportioning the assets among the shareholders.

A correspondent at Dayton, Wash., under date November 22, says that there is still on hand in Columbia County 1,350,000 bus. of this year's wheat and 1,000,000 bus. of barley, many of the farmers holding two years' crops. But the market is tied up indefinitely, dealers refusing to buy and farmers refusing to sell. Such a condition has not been recorded in the history of farming here. Barley is quoted at 15 cents a hundred pounds lower than at harvest time and wheat shows nearly the same reduction.

The Farmers' Elevator Co. at Louisville, Nebr., and the Mo. Pac. R. R. have come to an agreement as to trackage, the Elevator Company agreeing to build the grade for the siding to run to their elevator and the Railroad Company to lay the track at once. The trouble began when the Elevator Company was organized; they demanded a site on the right-of-way but were refused; they then built their elevator on land adjoining the right-of-way and went into court to force the Railroad Company to put in a side track.

## THE EXCHANGES

New York Produce Exchange memberships are quoted \$400 bid and \$450 asked.

The Nashville Grain Exchange expects to have a new chamber ready in the Exchange Building by January 1, 1911.

The New York Produce Exchange has disapproved the proposition to change the dates of opening and closing the Erie Canal.

The Philadelphia Commercial Exchange will send an agent abroad to look up the export grain prospects on behalf of Philadelphia.

The Milwaukee Chamber of Commerce has adopted a resolution favoring the passage by the Senate of the Stevens bill of lading bill.

The Pittsburg Grain and Flour Exchange has established a new grade ("Standard") of oats, in quality between No. 2 and No. 3 white.

Politics is beginning to take notice in the Philadelphia Commercial Exchange. It is said Pres. McKnight will have no opposition to re-election.

The Baltimore Chamber of Commerce has abolished the transportation committee, whose duties have been transferred to the traffic committee.

The Kansas City Board of Trade has voted to make a lease of a new building to be erected at the corner of Twelfth Street and Baltimore Avenue.

S. D. Thomas, Chief of the Baltimore Chamber of Commerce Inspection Department, on November 19 began his thirty-fourth consecutive year of service.

The Baltimore Chamber of Commerce will be represented at the National Board of Trade meeting by Chas. England, Louis Müller and Robert Ramsey.

Geo. Broomhall, Chicago Board of Trade European correspondent, has gone to the Argentine to report on the crops there from personal observation and study of the country.

A petition has circulated on the floor of the Chicago Board of Trade asking the directors to have all bonded and foreign wheat excluded from the United States visible supply, but the proposal was rejected.

A special committee, composed of S. P. Arnot, J. B. Adams, J. C. Wood, J. C. Murray and Robert McDougall has been appointed to suggest plans for remodeling the clearing house system of the Chicago Board of Trade.

B. Frank Howard began his forty-ninth year of business on the Chicago Board of Trade on December 1. This is a good many years, but Mr. Howard is still young enough to add still more to his high reputation as a statistician.

The New York Produce Exchange has provided by rule for a new grade of corn to be known as "steamer." It will not be a contract grade, but has been made to meet a demand that has come from abroad, and the grain will be handled by the exporters chiefly.

Delegates from the Chicago Board of Trade to attend the forty-first annual meeting of the National Board of Trade to be held in Washington, D. C., commencing on Tuesday, January 17, at 12 o'clock are George F. Stone, B. F. Howard, J. C. F. Merrill and W. H. Perrine.

The Minneapolis Chamber of Commerce will vote soon on an amendment to the rules to make the commission rate for receiving and selling corn on arrival or to arrive for account of non-members,  $\frac{3}{4}$ c. per bu.; on account of members,  $\frac{1}{2}$ c.; rate on oats, to members,  $\frac{3}{4}$ c. per bu.; barley, to members,  $\frac{3}{4}$ c.

The proposed amendment to the rules of the Board of Trade providing for a general increase in the commission rates has been posted for ballot on December 14. The amendment provides for an increase in the rate per 5,000 bu. of wheat, corn, or oats, from \$6.25 to \$10.00. The members' rate will be increased from \$3.12 to \$5.

The New York Produce Exchange has promulgated a rule ousting, on and after December 1, the so-called "put and call" brokers, who for years have made the foyer of the Exchange their trading headquarters. The new rule provides that persons who are not members of the Exchange will be permitted to enter the foyer only for interviews with members, and must retire as soon as this business is concluded.

### THE INDEMNITY SYSTEM.

E. W. Wagner, in a recent market letter thus succinctly explains the system of insurance trading as in vogue on the Chicago Board of Trade:

"The cost of indemnities, including brokerage, is \$5.50 per five thousand bushel lots for dallies and \$6.25 for weeklies. The smallest amount handled is one thousand bushels of wheat and five thousand bushels of corn or oats. Settlements are now made in cash at extreme close of the daily or weekly market. Monthly indemnities are seldom handled.

Example—If you are long at \$1.05 and buy daily insurance at \$1.03, if the market closes at \$1.02, you collect one cent per bushel. If weeklies your insurance is based on close at end of week. You can sell all the indemnities you desire, but to buy you must hold grain to amount of your insurance. Your protection orders must be placed with the brokerage house that handles your grain trades. If you are long, you can buy downs; if short, you buy ups. Your indemnities have no connection with your grain trades. Your regular trades must be closed out as usual in the pit."

### MOISTURE IN CORN AT MILWAUKEE.

The Supervisors of Grain Inspection and Weighing of the Milwaukee Chamber of Commerce, in accordance with the provisions of the Rules, have made the following decision:

"In inspecting corn which contains not more than  $\frac{1}{4}$  of 1 per cent in excess of the amount of moisture permitted in No. 3 corn of the various colors under the present rule, and which is otherwise qualified as to the amount of dirt and foreign matter contained therein to grade No. 3, the No. 3 grade may be placed upon such corn to cover discrepancies which arise in the testing.

### COUNCIL OF GRAIN EXCHANGES.

The executive committee of the Council of North American Grain Exchanges held an executive session in the office of President James Bradley on December 12, at 11 a. m. The following members of the committee were present: E. Pfarrius, New York; Frank Crowell, Kansas City; S. H. Jones, Duluth; N. L. Moffitt, and Bert Ball, St. Louis.

One of the most important actions taken by the committee was in reference to dues and fees. The By-laws were so amended that "Class B" was created, entitling exchanges not members of the Council to join with no initiation fee and \$100 a year dues, with the privilege of sending one voting delegate to the annual meeting and as many other delegates as desired.

The plans for the program were outlined for the February meeting at Chicago. This meeting will last three days, beginning on Monday, February 6. The delegates will be entertained at a luncheon at noon on February 6. Various subjects of interest to the grain trade from consumer to producer will be discussed during the three days' meeting.

### CHANGES IN EXCHANGE MEMBERSHIP

Peoria.—Secretary Lofgren reports the transfer of the membership to the Peoria Board of Trade of M. H. Kendrick to Chas. G. Weiler of the Corno Mills Co., Peoria.

Kansas City.—Sec'y Bigelow reports that James R. Ness, acting manager of the Southwest Milling Co., has been elected to membership in the Kansas City Board of Trade in place of R. W. Arndt, late manager of the Southwest Milling Co.

Chicago.—Sec'y Geo. F. Stone reports the following changes in the membership of the Chicago Board of Trade taking place during November: New members—Harry F. Louchheim, Jas. G. Sullivan, E. P. Bassford, Byron J. Carnes, John F. Jelke, Jr., Francis M. O'Donnell. Withdrawals—T. R. Swezey, F. T. Blakemore, Stephen A. Dalton, Chas. K. Liquin, H. O. Matile, Henry F. Douglas.

Milwaukee.—Sec'y Plumb reports the following names of members admitted to the Milwaukee Chamber of Commerce during the month of November and of the memberships transferred during the same period: New members—Roy I. Campbell, William Currie, J. H. MacMillan and Frank Harlow. Memberships transferred—E. E. Sidnam, T. C. Coughlin, deceased, Adam Currie, and John R. Drake, deceased.

Cincinnati.—Supt. Murray reports the following members of the Chamber of Commerce elected on December 5: T. Russell Chapman, superintendent French Bros.-Bauer Co., dairy and ice cream, 316 W. Seventh st.; Victor M. O'Shaughnessy, with James Walsh & Co., distillers and redistillers, Lawrenceburg, Ind.; Henry A. Poveleite, general freight agent, C. N. O. & T. P. Ry., Ingalls Building; Edward L. Sternberger, E. L. Sternberger Coal Co., miners and shippers of coal, 1616 First National Bank Bldg.; Julius Jacobs, feed business, 276 E. McMicken Ave.

### MOULDING PUBLIC OPINION.

The following address was put in type by us in September last, to appear in connection with the report of the proceedings of the meeting of the Council of North American Grain Exchanges in New York City, but was omitted for want of space as one of the papers that would best bear holding without loss of pertinence and worth. It is still "worth while" and has not been published in full, we believe, elsewhere. With this apology to Mr. Ball, we present it to the reader:—

Advertising is not easy, even when you know how. That which is good today may be worthless tomorrow. Publicity is such a wide subject that no



man has ever mastered it. If any one tells you he knows all about it, you can put him down as a fool or a liar. You remember the poem by John C. Saxe—

There were six men of Indostan,  
To learning much inclined,  
Who went to see the elephant—  
Though all of them were blind—  
That each by observation  
Might satisfy his mind.  
The first approached the elephant,  
And happening to fall  
Against his broad and sturdy side  
At once began to bawl:  
"God bless me! But the elephant  
Is very like a wall."

You remember the experiences of the other five; one, who caught his tail, said the elephant was very like a rope; another, who caught his trunk, said the elephant was very like a snake; another, who touched his ear, said the elephant was very like a fan; another, who grabbed him around the leg, said it was very like a tree; and the sixth, who felt of the tusk, said it was very like a spear.

The six wise men of Indostan  
Then argued loud and long,  
Though each was partly in the right  
Yet all were in the wrong.

While no man has ever seen the whole of this advertising elephant, I will venture to say that every grain man in the business, when the subject is mentioned to him, at once thinks of his little checker-board card in one or two grain papers and sighs.

It is stated in the "objects" of the Council of North American Grain that we are organized "to enlighten the general public as to the important service rendered by the exchanges in handling agricultural products." This may be done in many ways, but what is everybody's business is nobody's business. There is enough money wasted in duplication, not only between the members of the exchanges, but between the exchanges themselves, to create a fund ample to issue pamphlets, editorials, magazine articles, and general publicity if properly handled by the officers of this Council.

It is not my purpose to go into the details of the many channels of publicity, but rather to urge the importance of beginning on this tremendous work, if this organization is to fulfill its manifest destiny.

One of the first things to be accomplished is to see that a comparative table of all the markets of the United States is printed in every live newspaper and placed in the hands of every grain man in every territory at the earliest possible moment. All of this information is available at 1:15 in every primary market. Grain men of the United States are practically all listed. There are perhaps fifteen or twenty thousand of them. A large majority of them would subscribe for these papers containing the entire market without urging. An arrangement should be made to supply the others. The entire field can be covered by about twenty newspapers and there is not one of them which would not be glad to be designated as the district organ of the grain trade. Immediate steps should be taken to furnish the Associated Press, United Press, the Hearst Service, the Scripps-McRae, the Western Newspaper Union, Chicago Newspaper Association, American Press Association, and all kindred organizations with the official close of the market each day. This should be done free of cost to them, and the Council should immediately take up the question with all of them, with the view to sending out on their wires and printing in their publications as much of this comparative market as possible.

One of the reasons why the press associations do not send out a proper market is because they compile it in their own manner in the same style they have been using in the days gone by. We believe that if the quotations of the fourteen great grain exchanges could be printed side by side in every newspaper in the land, and every farmer and dealer should receive a copy of this table every day, the grain millennium would be at hand, and the marketing problem be solved.

Several Exchanges have already established publicity committees and are ready to work in harmony with the Council in covering the newspapers in their immediate vicinity and in sending out leaflets and other literature to the trade and to the public. We have found that the circulation managers of the daily papers which carry good market reports are always ready to co-operate in circularizing the trade with a view of extending their subscriptions. The trade papers are not only willing, but anxious, to forward the interests of the Council in every way, and have repeatedly asked for short articles from the well-posted members of the Exchanges. This is a priceless privilege which is now going to waste.

An effective way of getting our ideas direct to the farmer is to use the plate service of the various press associations, which may be done at an expense of about \$1.50 for a full six column page. These plates may be cut up into short articles, so they may be used as filling to save type setting, and in this way a page of matter will often furnish a year's supply. There are several hundred agricultural papers which will print articles and be glad to get them, if newsily and entertainingly written on live subjects.

All criticisms should be given proper attention instead of simply being ignored as in the past, and answers should be made to all editorials in the daily and periodical press which now so blithely deliver the exchanges a left-handed slap on every occasion.

The Council of North American Grain Exchanges could have its own organ, with regular subscribers, and entered as second class matter. The postage saved on one issue of such a publication, sent to

every grain man in the country, would be material, and an edition of ten thousand copies which would cost \$100, if sent out under a 1c. stamp; if entered as second class matter, as a regular publication, the postage would be but 1c. a pound. The time has come when the grain exchanges must reach the public promptly and systematically. A publication of this kind would pay for itself over and over again, especially if its columns were open to advertising, which might be advisable in order to help bear the burden of expense of a live Council.

Theodore Roosevelt has probably never used a display ad, yet he represents the quintessence of advertising. His method may be described as spontaneous publicity; and it perhaps would not be lese majeste to say that his popularity depends more upon his advertising than anything which he has ever done. His strength lies in the fact that he has nothing to conceal; that he is the same Teddy to the "rough rider" on the plains that he is to the Kaiser. He is always himself and doesn't care who knows it. We have nothing to conceal, and we should sedulously cultivate the press in order to eradicate the erroneous impression which many legislators have of us—that we are "undesirable citizens of predatory wealth." I do not agree with Emerson that the man who makes a better mouse-trap can live in the heart of the woods and still be famous, but I do believe that when you have built a better mouse-trap, you must advertise it with your whole heart and soul.

The public will believe any statement which is persistently reiterated. The average man, and almost every editor, believes that the grain business is a pure gamble. Why? Because the only thing published regularly and persistently about grain in the papers of the world are the future quotations, and the only matter of human interest pertaining to these future quotations is the story every few years of how somebody won or lost a fortune.

There has been too great a gulf fixed between what we know as "Cash Grain" and "Futures." We know that every transaction upon a board of trade is legitimate and is allied to every other transaction, but the public does not. We are like the fellow who winked at the girl in the dark—he knew what he was doing, but she never found it out. The broad underlying business of marketing the crops of the world is secondary in the public mind, and in the average town where there are no boards of trade the only glimpse the public gets of the grain business is the private wire house, and until lately the pernicious bucket-shop.

In other words, the Future tail has been wagging the Cash dog, and it is high time that the public should see the grain trade in its true proportions. In my estimation, every market report should be headed with the cash grain table, but with the exception of Toledo, which sends but one price, no market sends out its report in that shape. In fact, in the majority of cases, cash grain, if mentioned at all, is relegated to a very small and insignificant paragraph. This is one of the greatest tasks the Council of North American Grain Exchanges has to perform.

There is not a man in the grain business who has not been called a gambler for as long as he can remember. The charge is not true, and would not be tolerated in any other business. I have talked with scores of editors, from him of the Saturday Evening Post down to him of the Pee Wee Gazette, and I have yet to find a single editor who can tell which is the private wire house and which is the bucket-shop in his town.

In ancient and medieval times, before the day of the telegraph, alien races were constantly at war, growing out of misunderstandings, which were mostly trivial and unnecessary. The public does not understand us, and it is our own fault. The grain belongs to the people, and there should be a perfect understanding.

It is our most important duty to remould public opinion. Unfortunately, the burden of proof is upon us. Let us adopt Roosevelt's method; let us preserve our integrity and then let us take the newspapers into our confidence.

Advertising is getting acquainted. If you could personally know every man in the trade, and he could know you and you should have any business ability at all, you could not fail. We are all in business to make money, and we all want to make more money; and it is only by getting together we can stop the leaks and save unnecessary expense and trouble.

Meetings of this character eliminate prejudice.

"Howdy-do," and then, "good-bye,"  
Mixes just like laugh and cry;  
Here's my song and there's your sigh—  
"Howdy-do," and then, "good-bye."

Say "good-bye," or "howdy-do"—  
What's the odds betwixt the two?  
Comin', goin', every day—  
Best friends first to go away.  
Grasp of hands you'd rather hold  
Than their weight in solid gold;  
Slips their grip while greetin' you—  
Say "good-bye" or "howdy-do."

That is the way with friends you make at a convention. While it sometimes seems as though we are "ships that pass in the night," yet it is this fraternal spirit which draws us together. The more people a man knows, the fewer he meets of whom he is afraid. Familiarity eliminates terror. Let us take the whole fraternity into our counsels through the press.

The things which make men alike are better and finer than the things which keep them apart. You can't hate a man when you know him, because there is more good than bad in all of us. As many a man has learned, there is only the slightest difference between hate and love. Indifference is

worse than hate, for an active hate requires personal attention, and you cannot long devote your personal attention to any man without seeing some good in him which will pull the stinger. Those who understand the grain exchanges do not hate them. We believe that molasses catches more flies than vinegar, and while we should always be ready to fight for our rights against injustice and oppression, we much prefer that there be no quarrel to begin with.

Publicity is the great disinfectant and germicide, and if it were possible to print the inner proceedings of the trusts as they are, the force of public opinion would make it unnecessary to legislate against them. When it is possible for the newspapers to print the truth, the whole truth, and nothing but the truth about the grain business, treating producer and consumer, boards of trade and grain dealer alike, there will be no need of making laws to curtail this, to prevent that, or to transform the other.

Nothing worth while can be accomplished without great effort. No cause has yet triumphed from the mere fact of being worthy. It must be supported by honest, practical work, not merely good wishes. The work and purpose of the grain exchanges must be kept constantly before the public, and it is only by publicity that the prejudice which now exists can be removed and a thorough confidence established. At present there is no tie which unites the great agricultural interests, beginning with the farmer, extending through the country grain dealer, the city commission man, and the miller, and no matter what plans are suggested in conventions and conferences, nothing can be accomplished until the whole fraternity agrees upon the work to be done; and this result can only be attained through the medium of printer's ink.

## COMMISSION

H. H. Langenberg of the Langenberg Bros. Grain Co. of St. Louis, Mo., returned recently from a business and pleasure trip to Mexico.

W. S. Tullars has sold his brokerage business at Nashville, Tenn., to S. C. Wilkes & Co., and will engage in the grain business in Oklahoma.

W. H. Sterling, who has been in business on the Chicago Board of Trade for a number of years past, will make his home in the future at Medford, Ore.

The directors of the Chicago Board of Trade have admitted the firm of Lee W. Pardridge to the privilege of the clearing house association of the Board of Trade.

Proctor Towson, formerly salesman for J. A. Loane & Co. of Baltimore, is now connected with C. E. Clifton & Co. of Washington, D. C., as their Baltimore representative.

William P. Kennett and John L. Messmore were appointed delegates from the St. Louis Merchants' Exchange to the National Rivers and Harbors Congress in Washington, D. C., early in December.

E. J. Webb, one of the prominent grain men of London, England, was on the Chicago Board of Trade early in the month. He will visit all the leading terminal western markets before his return.

C. W. Peterson and Secretary C. F. Macdonald represented the Duluth Board of Trade at the meeting of the Northern Minnesota Development Association held at Brainerd, Minn., the latter part of November.

Hulburd, Warren & Chandler of Chicago, Ill., have opened an office at Detroit, Mich., at 416 and 417 Ford Building. W. H. Humphrey, who has represented the firm in Michigan for some time, will be manager.

The Mollett Grain Co., formerly of Frankfort, Ind., has removed its headquarters to Toledo, Ohio, and now occupies offices in the Produce Exchange Building. The firm owns a large elevator at McClure, Ohio, and ships a large amount of corn to Eastern ports.

The firm of G. M. Samuels has been incorporated to do a general business in grain, stocks and provisions on the Chicago Board of Trade. Edward M. Samuel is president of the company, George C. Parker, vice-president, and James G. Sullivan, secretary. Offices are at 83 Board of Trade Building.

It is announced that a new firm has been organized at Chicago, Ill., including Ford R. Carter, Robert Shimmie and John Douglass to do a general commission business in grain stocks and provisions. All the members of the new firm are well known in Chicago grain and stock circles. The business will be commenced about January 1.

Secretary Geo. F. Stone, B. Frank Howard, of the Trade Bulletin, Chicago Board of Trade; Vice-President J. C. F. Merrill have been designated by A. S. White president of the Chicago Board of Trade to represent the institution at the forty-first annual meeting of the National Board of Trade which begins its sessions at Washington, D. C., January 17.

The B. & M. and B. & O. grain elevators at Boston are both equipped with driers operated at the following rate: Corn—Steamer,  $\frac{3}{4}$ c. per bu.; No. 3 and No. 4, 1c.; oats—rejected, 1c.; all other grain (salvage excepted)  $1\frac{1}{2}$ c.



## IN THE COURTS

William N. Spellman, a grain dealer of Beatrice, Nebr., has filed a petition in bankruptcy.

S. M. Booth, cashier for N. A. Faulkner & Co., of Tampa, Fla., has been charged with embezzlement by his employers.

The referee in bankruptcy at Danville, Ill., has granted Oscar Layers, trustee for the C. M. Richetts bankrupt estate, permission to sell the elevator at Fisher, Ill.

Durant & Elmore Co., grain merchants of Albany, N. Y., some time ago filed a petition in bankruptcy. The liabilities of the firm were \$1,041,563 and the assets \$16,572.

Two farmers have filed objections to the selling of Herb Brothers' elevator at Emington, Ill., by the referee in bankruptcy as they both had grain stored in the elevator at the time of the failure.

William C. Droge and Henry F. Droge of the Droge Elevator Co. at Council Bluffs, Iowa, have brought action against the Union Pacific Railroad, alleging discrimination and unfairness in the treatment of the elevator.

A verdict was recently returned by the district court in favor of the Fort Worth Grain & Elevator Co. of Fort Worth, Texas, which was suing the Star Mill & Elevator Co. of Amarillo, for \$3,000 claimed to be due the company owing to the refusal of the latter to deliver 40,000 bushels of wheat when the price advanced.

J. Sidney Smith & Son of Kansas City, Mo., recently brought suit against the Chicago Great Western Railway Co. to recover \$7,640, the value of eleven cars of corn which were being shipped to the Independent Elevator near Omaha last April and were destroyed by fire with the Nye-Schneider-Fowler Grain Co.'s elevator in Omaha, while yet on the side track.

Charles H. Kerr, formerly manager and grain buyer for the Farmers' Elevator Co. at Missionhill, S. D., was recently bound over to the Circuit Court on the charge of embezzlement of funds to the amount of \$10,000. Mr. Kerr, it is claimed, had been speculating on the Minneapolis Board of Trade through Quinn-Shepherdson Co. of Sioux Falls. Bonds were fixed at \$2,000.

John L. Jones has agreed to turn back into the assets of the defunct State Bank of Chelsea, S. D., an elevator which he bought from one of the bank officials at a price unsatisfactory to the creditors, provided a larger price can be obtained for it before January 1. The price paid was \$4,500 but the creditors allege that it was worth \$7,500, as \$7,000 were paid the last time it was sold.

A verdict in favor of Charles W. Pardridge, a wealthy merchant, who was being sued by Alonzo J. Cutler, a Board of Trade operator, was returned in Judge Windes' Court in Chicago, recently. Mr. Cutler claimed that he had advanced \$48,000 in speculations for Pardridge on the Board of Trade. Pardridge contended that Cutler had promised to give him credit for \$100,000, but had sold him out.

### ARBITRATION DECISION.

The following arbitration decision by the Kansas Association Committee has been kindly supplied by See'y Smiley:

*John McClune, Hoyt, Kans., Plaintiff, vs. Salina Produce Company, Salina, Kans., Defendant.*—C. A. Smith, F. B. Bonebrake and J. C. Bradley, committee.—In the above entitled case it appears that the plaintiff sold to the defendant a car of No. 3 or better corn, which the defendant sold in turn. The plaintiff shipped upon his sale car corn No. 50706 to the defendant's customer. Upon receipt of the corn it appears that said customer took about a half a bushel of corn out of said car to try to grind it, but found it to be so soft it would not grind. There is nothing in evidence to show how this sample was obtained, or whether or not it was a fair sample of the car. Upon failure to grind the corn said customer telephoned the defendant refusing to accept said car of corn, claiming it to be damp, tough, unfit to mill, and not No. 3 corn. The defendant thereupon called up the plaintiff and advised him that the car was refused with the reasons therefor, and asked him to talk to the customer for himself, which the plaintiff proceeded to do. The corn being still refused, the plaintiff ordered it to Kansas City, where it graded No. "3 mixed corn tough" and was sold upon the market. The diversion of the car resulted in a net loss to the plaintiff of \$68.35, which he claims the defendant should pay.

The defendant shows that the plaintiff did not advise it that the corn was being handled for its account, and denies any responsibility for the plaintiff's loss. The defendant also shows that though the market for corn declined, it later furnished to his customer another car of corn which was accepted on the original contract.

Your committee further finds that the plaintiff erred in ordering the corn to market and disposing of it without previously advising the defendant that the car was being handled for its account, thus preventing the defendant from taking steps to make other disposition of the corn without such a loss as resulted.

Your committee believes this to be a proper matter to settle by compromise measure, and directs that the defendant pay to the plaintiff the profit it made upon the car of corn which it bought and applied upon the contract involved, namely \$12.26; and further, that the costs of this case be divided equally between the parties hereto.

### CANADIAN PATENT DECISION.

The case in the Exchequer Court of Canada, between the Barnett & McQueen Company, Limited, plaintiffs, and the Canadian Stewart Company, Limited, defendants, was lately decided in favor of the defendants. In this action the plaintiffs asked for an injunction restraining the defendants from infringing two patents and also for an accounting on contracts which the defendants had already completed for the Grank Trunk Pacific Railway and the Consolidated Elevator at Fort Williams, Ont. The plaintiffs alleged that the defendants had infringed their patents by the construction of the two elevators in question. The first patent in suit was dated April 14, 1908, and was granted to Finlay R. McQueen for improvements in grain storage elevators. The principal claim of the patent is as follows:

"A plurality of cylindrical grain bins, forming a monolithic structure and having their adjacent peripheral portions rigidly connected and forming supplemental storage bins in the intervening space, vertical webs extending through adjacent supplemental bins to form leg passages in combination with bifurcated elevator legs, extending from below said bins to adjacent leg passages, substantially as described."

The essential feature of the second patent, which is dated August 18th, 1908, is the particular location of the column supports for the bin arrangement of the first patent. The first patent did not provide for any particular bin supports, but left the matter to the art of the mechanic. The first claim reads as follows:

"The combination with a multiplicity of bins, having their axes arranged in rows in two directions, and on lines that intersect each other approximately at a right angle, and having tangential engaging sides, united by vertical extended body portions, certain of which constitute column extensions of supporting columns, below said bins vertically aligned and united with said tangential column extension portions of said bins, and supporting the said bins only at two diametrically opposite points, substantially as described."

The defense raised to the right of plaintiffs to recover were the usual defenses, to-wit, lack of subject matter, no invention, no infringement, abandonment and anticipation. The Court in rendering its decision in regard to lack of invention relative to the first patent said:

"There can be no contention that the elevator legs, placed as they are by the patentee, operate in any other manner or have any different function than elevator legs in other storage and working house elevators. It is merely a question of convenience of arrangement having regard to the class of construction. Cutting off a space by means of a wall to form a protection was well known in the art. If the claims in question are combination claims as distinguished from aggregations, then in my opinion, there is no novelty whatever. Previous references to the art show that such a combination, if such it can be termed, was well known long prior to the alleged invention."

In regard to anticipation the Court said:

"In my opinion, the supposed invention of the patentee is completely anticipated by what is called in the evidence the Montreal Harbour Elevator. This elevator was constructed during the years of 1902 and 1903. It was in complete working order in 1903, and has been operated ever since with success."

"I fail to see any material difference from a patent point of view between this structure of the Montreal Harbour Elevator and that of the plaintiffs' patent. Stress seems to be laid on the fact that the plaintiffs' structure is monolithic. There was nothing new in the art as to monolithic structures. The patentee is not confined to what would be technically a monolithic structure. The Montreal structure is for practical purposes monolithic; at all events, the bins are rigidly united at their adjoining peripheral portions. The load is carried in the same manner, distributed by the floor and girders in the same manner, and the load is carried by column extensions, or their equivalent, placed and situated in the same relative positions in line with the column extension."

In regard to lack of invention the Court said:

"While it may be that very slight invention, especially where the result has been beneficial and useful, will support a patent, I cannot

think that in the case I am considering there is any invention.

"I have not lost sight in considering the case, of the other previous anticipations, which should go a long way to destroy the plaintiffs' patents. Neither have I overlooked the contention of the defendants, that having regard to the state of the arts, and prior disclosure the patents, even if valid, would have to receive such a restricted construction, as to require me to hold that the defendants' construction is not an infringement."

### A RICE STORAGE CASE.

The Texas Supreme Court on November 9 affirmed the trial court judgment in the case of the appeal of J. E. Broussard and others against the South Texas Rice Co. The Rice Company by this decision involves the value for 1,315 sacks of rice destroyed by fire while in the possession of Broussard and associates, who do a milling business at Beaumont.

The question involved was whether the payment of 2 cents per sack for insurance covered the entire value in case of loss by fire. Broussard contended in the court below that the 2 cents charged had been imposed to protect his interest in the rice, upon which he had a lien for advances and that the rice was insured for enough to cover indebtedness to him and he had accounted to the South Texas Rice Company for the proceeds of such insurance.

It is shown that the Rice Company had for years taken its rice to Broussard for milling, being charged a certain sum for the purpose of insurance. There was nothing to show whether the insurance was total or partial, only a 2 cents charge being entered for insurance, which was never explained to the Rice Company further than that it was given to understand that its rice was protected by insurance thus purchased. When the fire occurred the rice was found insured to the full amount which 2 cents per sack would pay, but this was insufficient to cover the entire loss.

In accordance with the Rice Company's claims for total value, the Supreme Court cited cases in support, showing that it has been held that where it becomes the duty of a party to insure property and he fails to do so, the presumption is the goods were to be insured for their full value. The opinion adds: "It is difficult to see how any other rule can properly be applied. To insure goods properly means to insure the entire thing and at its full value."

It is stated further: "The jury did not find a verdict upon this ground, but upon the ground that there was a general custom among the rice mills near Beaumont to insure the rice of their customers at its full value; yet we think no other verdict could have been properly found by them. We are inclined to think that the evidence in the case was not sufficient to show a custom of the mills to insure their customers' rice at full value, but we find it unnecessary to decide that question. Judgment is therefore affirmed."

### RULING ON RAILWAY CONVERSION.

In the case of Lillian B. Tauger against the N. P. R. R. and others, the question was involved of the conversion of a car of flax by the Railroad Company after the seed had been delivered to the carrier. Passing over the court's ruling on the matter of the introduction of certain evidence the Supreme Court of North Dakota says:

"On proof of delivery of property to a common carrier in sound conditions and of its failure to redeliver it, sufficient case is made to sustain a recovery for loss in an action by the shipper on his contract, with certain exceptions which have no application in this case, but other and different proof may be necessary in such case to sustain an action for conversion against the carrier."

"To constitute conversion there must be a positive tortious act, a tortious detention of personal property from the owner, or its destruction, or an exclusion or defiance of the owner's right, or the withholding of possession under a claim of title inconsistent with that of the owner."

"The gist of the action on the contract in such case is the failure to deliver, while the gist of an action in trover is the conversion, and the mere showing of a branch of contract may not prove conversion."

According to our inquiries to interests representing about one thousand country elevators covering the three Northwest states, we should say that at the present time there are the following percentages of the 1910 crop still on the farms: Wheat, 36%; flax, 9%; barley, 9%; oats, 12%. As far as wheat is concerned, the above amount left on the farm is about normal. There seems to be no question that the holding of grain in country elevators is larger than it was last year, but what the percentage would be is too indefinite a matter to justify an opinion.—Van Dusen-Harrington Co.



## HAY AND STRAW

The alfalfa mill at Ft. Cathoun, Nebr., has been enlarged.

A new side track is being built to the alfalfa mill at Marion, Nebr.

The total crop of alfalfa in Ohio will be about 68,519 tons this year.

Olaf Anderson has started a wholesale hay business at Adolph, Minn.

The Alfalfa Meal Association intends to erect an alfalfa mill at Concordia, Kan.

The alfalfa seed crop in Kansas is better this year than for the last five years.

Pennsylvania shows the highest hay yield percentage of all the states this season.

Alfred McDowell now has charge of the McCaull-Webster Elevator at Forestville, S. D.

J. L. McCoy of Oklahoma City, Okla., intends to erect an alfalfa mill at Winfield, Kan.

Alfalfa is now being raised successfully in Florida in the sandy regions tributary to Lake Kissimmee.

The American Hay Co. has purchased 9 "new way" Hercules Hay Presses to be used at Quebec, Que.

H. F. Henninger has resigned as manager of the McFadden Elevator at Easton, Ill., and A. F. Crum succeeds him.

A new variety of alfalfa has been discovered in the region beyond the Arctic Circle which will be introduced into this country.

A \$40,000 alfalfa mill will be erected at Fort Scott, Kan., by the Quakers who are sowing thousands of acres in alfalfa in that region.

The hay sheds of W. T. McLaughlin Hay & Grain Co. at West Roxbury, Mass., were destroyed by fire recently with a loss of \$4,000.

The St. Joseph Hay & Grain Co. of St. Joseph, Mo., has recently completed a hay warehouse on the Burlington and Rock Island Railroads.

The Verden Alfalfa Co. of Verden, Okla., has been incorporated by J. N. Jones, B. F. Wilson, J. M. Phillips, Charles Tippie and H. J. Caskill, with a capital stock of \$15,000.

A two and one-half ton per hour alfalfa mill has been installed in the alfalfa meal plant at Enterprise, Kan., which is owned by the C. Hoffman & Sons Milling Co. The mill is of the ball-bearing type.

Choice Canadian hay is scarce and going to be scarcer, says a Canadian exchange, and prices are advancing. Exports to Great Britain and the United States have been heavy during the past three months, and are likely to continue. The lower grades are in over supply.

A fifty-ton alfalfa meal mill will be established at Rifle, Colo., in the near future. The Rifle Alfalfa Meal & Manufacturing Co. has been incorporated with a capital stock of \$50,000. Among the directors are: E. McLearn, Fred G. Shaffer, W. H. Haley, B. F. Haley and W. P. Clough.

We can now report a much firmer market for all grades of timothy and good clover mixed hay. The heavy receipts of last week are cleaned up and are hardly ample for the demand. Poor clover hay is still plentiful, however, and prices obtained are low. —Pittsburg G. and H. Reporter, Dec. 6.

The Erie Railroad placed an embargo on hay December 1, and will not accept shipments consigned for lighterage delivery in New York harbor. They will accept shipments for Jersey City delivery and all New York and Brooklyn stations when same can be moved through in original cars.

Plans are being made for the erection of an alfalfa mill at Gilcrest, Colo., which will have a capacity of thirty tons per ten hours. More than \$15,000 have been subscribed and a committee of Walter Starbird, Philip Lorenz and Fred Johnson have gone to Oklahoma City to study the alfalfa mill there.

The San Francisco Hay Association's report of stocks on hand November 15 showed 280,170 tons of hay on hand available for the San Francisco market. Last year's report totaled 258,570 tons, which at that time was the largest amount ever reported on hand. With these enormous stocks on hand at present, very little encouragement can be held out for better prices. The demand at date named was very light.

Loftus-Hubbard Co., St. Paul, November 26, say: "We realize that a great many people are holding back their hay expecting to get higher prices during the late winter and spring, but we believe that the present will show greater net returns to the shipper than by waiting two or three months, and therefore, urgently advise liberal forwarding of available hay. Many points in Wisconsin which have so far taken from twenty-five to fifty cars this season report the farmers who needed hay as having filled their storage capacity and will not need any more

hay this season. When one considers that there is much to be gained by shipping hay before the snowy weather, we believe that, coupled with the present high prices should be sufficient inducement to ship hay instead of to hold same. A blockade has been declared on all lines reaching the head of the lakes, and farmers shipping hay will from now on for some time be compelled to prepay freight."

Alfalfa is said to be gaining in popularity in the vicinity of Liethbridge, Alberta. This season, however, all hay was scarce, on account of the drought, and alfalfa, usually worth \$15 a ton, is now bringing \$25 as a minimum. With a yield of two tons per acre per cutting and with three cuttings a year, this year a man with a crop of alfalfa could get at least \$150 per acre on irrigated land. The district has had irrigation for fifteen years, and irrigated land sells from \$50 to \$75 an acre, with a water rate of one dollar an acre.

Most of the hay reaching the Twin Cities from Western Minnesota this year, say Loftus-Hubbard of St. Paul, is prairie hay of good color which grades up better than any in any previous years. Receipts from southern Minnesota and Iowa points are constituted either of tame hay or a mixture of tame and wild, in this case being a midland hay of fair feeding qualities. The timothy received from

## LATE PATENTS

Issued on November 8, 1910.

Dust Collecting and Separating Apparatus.—Chas. H. Stuble, Lincoln, England, assignor of one-half to Franklin White, Lincoln, England. Filed April 23, 1909. No. 975,300. See cut.

Weighing Machine.—Henry Richardson, New York, N. Y. Filed August 19, 1909. No. 975,158. See cut.

Issued on November 15, 1910.

Conveyor Belt.—William M. Metzler, Akron, Ohio. Filed November 22, 1909. No. 975,560. See cut.

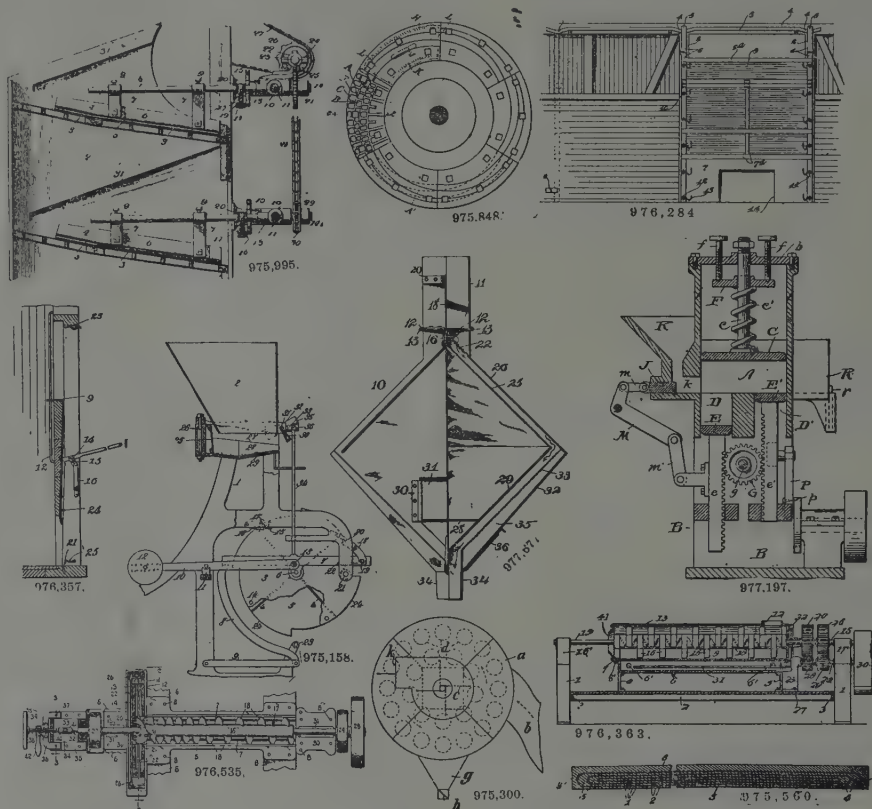
Conveyor Mechanism.—Jacob Mussell, Caldwell, Idaho. Filed January 27, 1910. No. 975,565.

Cleaning Attachment for Grain Separators.—Faustin Prinz, Milwaukee, Wis. Filed July 10, 1899. No. 975,995. See cut.

Grinding Plate for Attrition Mills.—Spencer L. Frazer and Axel E. Jacobson, Minneapolis, Minn. Filed October 14, 1909. No. 975,848. See cut.

Issued on November 22, 1910.

Grain Door for Cars.—Olaf J. Olson, Clontarf, Minn. Filed March 18, 1910. No. 976,284. See cut.



northern Iowa is receiving many notes of praise from consumers in northern Wisconsin and Michigan, who now specify this kind of hay when forwarding their orders, with the consequence that this hay often brings a premium of 50c per ton on this market.

### DAMAGE FOR FAILURE TO DELIVER.

The W. U. T. Co. failed to deliver a certain telegraphic message filed at Detroit for transmission to Kansas City, Mo., the message having been lost after reaching Chicago. The failure cost the sender \$300; and when he claimed damages the company offered to refund only the charges paid, 40c.

The message was written on a regular telegraph blank, which contained the agreement that in case of nondelivery the Telegraph Company would be liable only for the amount received for sending the message. The trial court held the contract was invalid, because it conflicted with a state law regulating the liability of telegraph companies; and the Supreme Court of Michigan held that inasmuch as Congress had passed no law fixing the liabilities for nondelivery it was proper for a state to do so; and the judgment was affirmed. The Supreme Court of the United States on November 28 approved the judgment of the Michigan courts.

As showing the saving to certain industries by the reduced price of corn, the Corn Products Refining Company is quoted. Its works run 300 days in a year, averaging 100,000 bus. a day (112,000 bus. on November 10), thus consuming 30,000,000 bus. on which, at 12c. a bushel, there would be a saving in cost of materials consumed of \$3,600,000 a year.

Seed Corn Tester.—Joseph S. Naylor, Ames, Iowa, assignor of one-half to C. V. Gregory, Ames, Iowa. Filed March 16, 1910. No. 976,485.

Grain Door.—Ransom Goodwin, West Union, Ill. Filed February 23, 1909. No. 976,357. See cut.

Feed Mill.—John C. Woodcock, Litchfield, Ill. Filed August 16, 1909. No. 976,535. See cut.

Feed Mixer.—Charles H. Hinkhouse, Omaha, Neb. Filed March 23, 1910. No. 976,363. See cut.

Issued on November 29, 1910.

Grain Door.—Edward Posson, Chicago, Ill., assignor to Grain Belt Car Specialty Company. Filed July 6, 1908. No. 977,042.

Grain-Decorticating Machine.—Robert E. Kimball, Cleveland, Ohio, assignor of one-third to L. H. Webb and one-third to E. L. Thurston, Cleveland, Ohio. Filed January 5, 1905. No. 977,197. See cut.

Issued on December 6, 1910.

Belt Fastener.—Isaac Jackson, Glossop, England. Filed February 24, 1910. No. 978,025.

Seed Corn Grader or Separator.—John A. Hafsas, Gross, Nebr. Filed May 19, 1910. No. 977,524.

Grain Separator.—Edward J. Pidgeon, Newark, N. J. Filed February 1, 1910. No. 977,677. See cut.

At Spokane, Wash., on November 22, a wheat sale, unique in the history of wheat dealing in the Palouse, was made by J. S. Klemgard, vice-president and manager of the Pullman State Bank. He sold 9,000 bushels belonging to himself and his tenant, Charles Kincaid, by advertising, for sealed bids and selling to the highest bidder. Seven firms bid on the wheat, which was of the Red Russian and Colgate Red varieties and a little off-grade owing to smut.



## BARLEY and MALT

The Regent Grain Co. is erecting a malt house at Regent, N. D.

The Riverside Malting Co. of Buffalo, N. Y., has increased its capital stock from \$100,000 to \$200,000.

The Hansen Malting Co. of Milwaukee, Wis., recently increased its capital stock from \$25,000 to \$400,000.

Forty thousand bushels of No. 1 barley have been ordered by the coast brewers from the grain dealers of Dayton, Wash.

The Froedtert Brothers Grain & Malting Co. of Milwaukee, Wis., has increased its capital stock from \$125,000 to \$500,000.

The world's barley crop is not as large as last year, there being only 1,334,000,000 bushels, as against 1,414,000,000 bushels in 1909.

An elevator is being erected at Bellechester, Minn., by the Red Wing Malting Co. The house will have a capacity of 60,000 bushels. Wm. Huff of Bellechester has the contract.

The barley taking the world's championship prize in the competition at the recent Brewers' Exhibition, London, was Webb's Kinver Chevalier, a strain that has won this prize on no less than ten occasions.

The plant of the Consumers' Malting Co. at Minneapolis, Minn., which has been in the hands of a receiver, has been purchased by the newly organized Minnesota Malt & Grain Co. for a consideration of \$140,000.

At a meeting of the Fond du Lac Malt & Grain Co. at Fond du Lac, Wis., W. C. Reing was elected president; George Zett, vice-president; L. E. McKinnon, secretary; W. C. Reining, L. E. McKinnon, George Zett, Joseph Haefner and George Seeber, directors.

At the annual meeting of the American Malting Co., Henry B. Ketcham was elected a director to succeed J. R. Williston, who declined re-election; and William E. Payne and Charles H. Zehnder were elected to succeed M. S. Driggs, deceased, and A. Muray Young, resigned. Other directors were re-elected.

The barley crop of 1910 in the five states of Iowa, the Dakotas, Wisconsin and Minnesota, show a net decrease of 19,708,000 bushels. There are many who claim that the decrease will be even greater than this; in other words, the crop in the five states named will only total about 80,000,000 bushels instead of over 87,000,000 bushels, the amount of the Government estimate.—Brewers' Review.

The total production of barley this year, says the Minneapolis Market Record, is estimated in the Government's preliminary report at 158,138,000 bushels, against 170,284,000 bushels in 1909, showing a loss from last year of some 12,000,000. With this leverage on values, it is expected that prices will be well maintained, especially for good malting grain, although the good quality justifies a high percentage to that grade. The United States stands relatively high in the volume of barley grown, although Germany, with much smaller area of barley grown, is close up with about 140,000,000 bushel crop, with Russia, Spain, United Kingdom, Austria-Hungary and Belgium large raisers of this grain. Production in the countries named is reported, taken together, larger than an annual average by a small per cent.

"Barley is in a class by itself this year," said Fred F. Bullen, the well known maltster. "This is precisely what my Northwestern people told me some months ago, and it is being demonstrated daily. There is not enough barley this year to meet the demand. The trade here will not buy the California malt because they had trouble with it when they used it three years ago. The Government reports a shortage of about 12,000,000 bushels in the total crop, but the shortage east of the Rockies is at least 20,000,000 bushels. Farm reserves the country over at Christmas time are not over 20 per cent, according to the highest estimates that I have been able to find anywhere. They are usually about 60 per cent at this time. The quality is generally fine, as it is all good color, although some is light. Losses in cleaning run up from 5 to 25 per cent because of thin barley, oats, seeds and wild oats mixtures. As barley is not raised as extensively as the other grains, a dealer or maltster has no means to protect himself in the speculative market like dealers in wheat, corn or oats. Prices of malting barley have advanced about 10c in two weeks and about 20c from the low price this fall."—Record Herald.

### BARLEY IN THE SOUTH.

Barley in colonial days was one of the leading grain crops of Maryland, Virginia and the Carolinas, and prior to 1892 nearly all the Southern States produced enough barley to warrant their inclusion in the statistics of barley production in the U. S.; but at this time, so greatly has the production declined in the South, only in Maryland, Virginia, Kentucky, Tennessee and Texas are the sta-

tistics collected; and these in 1909 reported a total yield of only 196,000 bushels. The average acre yield ranged from 24 bus. in Kentucky and Tennessee to 28.5 bus. per acre in Virginia and 32 in Maryland, Texas trailing with only 19.4 bus.

The cereal is, therefore, no longer a grain crop, even in the states named, but is grown rather for hay and pasture, the most popular variety being Tennessee Winter, a six-rowed bearded barley selected and improved by the Tennessee Experiment Station at Knoxville, which gives the best results, as a rule, in the face of numerous experiments with other types. Wheat grain is thrashed out and used for feed, being nearly equal to corn for that purpose, when used as part (not exceeding one-half) of a ration for horses and cattle, the best results being obtained when the grain is crushed or coarsely ground as in California. The hay is very nutritious and readily eaten by stock of all kinds, especially when cut and cured before the crop becomes ripe, as in the latter case, if the grain be allowed to fill, it does so at the expense of the stem and leaves, while the hard beards injure the mouths of the animals.

The crop has many recommendations aside from its value for the grain, and justifies the publication of the new "Farmers' Bulletin 427" by H. B. Derr, from which the above data have been obtained.

### BARLEY IN AMERICA.

W. H. Prinz, in a late address to the Chicago Brewmasters' Association, gave a brief sketch of the "History of Barley" which he says was "no doubt the first grain known to mankind" and the "parent of wheat, rye and oats." In America the first planting of barley was at Jamestown in 1611. When the Dutch settled on Manhattan Island they began at once to grow barley from English and Dutch seed. This was a winter barley of Pomeranian origin.

From New York state barley traveled along the lakes and rivers to Canada, Michigan, Ohio, Kentucky, Tennessee, Missouri and Illinois; and Mr. Prinz said: "I remember the time when we got all our barley for our malt house in Peoria, direct from the farmers; and there was a strip of land below Pekin, called Sand Prairie, settled by Low-German farmers, where they raised the best of barley for a long time. Chinch bugs, however, and the failure to practice crop rotation put an end to the raising of barley in Illinois. Then barley went to Iowa, Wisconsin, Minnesota and the Dakota's and was raised as summer barley. In Ohio and other Southern states it is still raised as a winter barley and called fall barley. This barley has finer properties than any of which I know.

"Now going back to Iowa, Scott County, particularly, has a fine soil and was settled by Low-German farmers who knew how to raise and take care of barley, and for years they raised the finest of barley, which became famous as 'Scotch' barley. No doubt much other barley was called 'Scotch' in order to share its popularity and to gain a better price. Later on, when a younger generation of farmers, who did not care to work so hard as their parents, predominated in Scott County and failed to practice crop rotation, this barley deteriorated; and there is little or any of the old famous 'Scotch barley' left today. There may, however, be some left in the Amish Colony, Amana, Iowa.

"The Chevalier barley, found on the Pacific Coast, was developed by the Rev. J. Chevalier, rector of Stoneham, Suffolk, England. But it was Lord Leicester who raised it in any quantity.

"Late I found two new barleys on the Coast, Ouchak and the Moravian; this last-named barley is the only high albumen barley raised on the Coast.

"The White Club barley of Utah is the only true six-rowed barley we have in this country.

"The Montana two-rowed is of the Hanna and Saale type and came from Germany, the Oderbrucker—a four-rowed barley—raised in Wisconsin, Minnesota and the Dakotas. The Manchury, also raised in these states, is a variety that has been tested and distributed by the Wisconsin agricultural station, for which Professor Moore deserves much credit. Professor Hunt states that this variety originated in Manchuria, China. A scientific traveler in the year 1859 brought some from eastern Asia to Germany, and it was grown in the King's garden in Sans Souci with success. Dr. Herman Grunow, of Mifflin, Iowa County, Wisconsin, while in Germany on a visit, was advised to try some of this barley in America and brought home with him two pounds of seed. This was sown and compared with twelve other varieties, and proved much superior to any on trial."

D. K. Whalen has been appointed superintendent at the terminal elevators of the Exchange Grain Elevator Co., at St. Louis Park, Minn. Two years ago he received the same appointment but the plant burned a few days after he assumed control. Mr. Whalen was formerly manager of the company's plant at Glencoe, Minn. He will be succeeded by his brother, who was formerly at Webster, N. D., in the employ of the Exchange Grain Co.

## PERSONAL

F. L. Somers is manager of the elevator at Risk, Ill.

E. O. Moffatt of St. Louis, will sail in January for South America.

Ralph Theisen has taken charge of the elevator at Zumbro Falls, Minn.

J. W. Rademacher is buyer at the elevator of J. C. Whalen in Kent, Minn.

John Bleibaum has taken charge of the Atlas Elevator at Wessington, S. D.

Henry Lichtig of the Lichtig Grain Co., of Kansas City, Mo., was recently married.

Dan McGrath has become general agent of the Neola Grain Co. at Charter Oak, Iowa.

E. Holtz has become buyer for the elevator at Huntley, Minn., succeeding Mr. Brown.

C. D. Coburn succeeds J. E. Stough as manager of the Horde Elevator at Bradshaw, Nebr.

U. G. Mills has resigned his position as manager of the Farmers' Grain Co. of St. Joseph, Ill.

Harry B. Smith has severed his connections with the L. A. Morey Co. of New York City, N. Y.

A. E. Rezac has resigned his position as manager of the Omaha Elevator Co. at Wahoo, Nebr.

Mr. Paulson has taken charge of the Dakota & St. Anthony Elevator Co.'s elevator at Claremont, S. D.

Cal. Hoskinson of Royal has taken a position with the Clearwater Elevator Co. of Clearwater, Nebr.

James Yale has accepted a position as grain buyer for the Columbia Elevator Co. at Raleigh, N. D.

W. I. Saxton has closed his elevator at Culbertson, Mont., and taken personal charge of his house at Mondak.

Colonel S. C. Woodson of the Woodson Grain Co. of Kansas City, Mo., has been appointed a judge of the County Court.

George Ebbighausen of Hallock, Minn., has gone to Bentley, N. D., to become connected with the Woodworth Elevator Co.

W. L. Butterfield of Orchard has taken the position of manager for the McCaul Webster Elevator Co. at Copenhagen, Nebr.

C. S. Bassett, manager of the Pacific Coast Elevator at Washtucna, Wash., recently married Miss Florence Williams of Denver, Colo.

W. J. Harms has resigned his position with the Crown Elevator at Wheaton, Minn., of which he had charge and has gone to Bristol, S. D.

A. D. Kaga, the veteran grain dealer of Filson, Ill., having sold his elevator to his son and C. C. Gray, will take a rest from business.

J. Collin Vincent now represents the Baltimore Chamber of Commerce on the Associated Federation of Boards of Trade of Maryland.

W. W. Granger, president of the Union Grain & Hay Co., of Cincinnati, Ohio, recently underwent a successful operation for gall stones.

H. J. Hutton of the Mystic Milling Co. of Sioux City, Iowa, was recently elected vice-president of the Terminal Elevator Co. of that city.

Elmer A. Cope, treasurer of the Updike Grain Co., of Omaha, was recently attacked by a burglar in his home, tied to the bed and robbed of \$70.

A. A. Reed was reappointed to the position of manager of the Farmers' Elevator at a recent meeting of the Farmers' Elevator Co. of St. Hilaire, Minn.

J. B. McLemore, a prominent grain man of Nashville, Tenn., was recently elected secretary of the Southeastern Millers' Association to succeed W. E. Castle.

F. S. Cowgill, president of the Omaha Grain Exchange, had his leg broken between the knee and hip when his horse which he was riding fell on the wet pavement.

David Horn, who is retiring from the position of Dominion Grain Inspector, was presented with a handsome cabinet of flat silverware, valued at \$400, by the Winnipeg Grain Inspection staff. Mr. Horn's brother will fill the vacancy in the office.

William P. Griffen, of Pittsfield, Mass., a veteran grain dealer, is still active in business, although he recently celebrated his seventy-fifth birthday. He was born in Quaker Springs, Saratoga County, N. Y., of Quaker parents. When he was seventeen years old he went to Albany where he entered the wholesale grain business with his brother. Later he retired for a while, until 1871, when he formed a partnership with W. B. Barrows. After 1881 he became sole proprietor of the business in which he is still engaged. Mr. Griffen is a Mason and prominent in society.



## ASSOCIATIONS

The Trade Rules Committee of the National Association has ruled that an official weigher's certificate bearing date subsequent to the expiration of the agreed shipping time limit is substantial evidence of non-conformity with the terms of the contract.

"By some inadvertence," says Sec'y Courcier of the National Association, "Milwaukee was not included in our last annual report of the markets that had adopted Uniform Grades. The Milwaukee Chamber of Commerce has not only adopted the Grades but is also making a special endeavor to bring their observance within the technical requirements of the phraseology."

Sec'y Strong has the satisfaction of announcing that both the Chicago & Eastern Illinois Railroad Co. and the Mobile & Ohio Railroad have accepted the agreement with the Illinois Association for a payment for claims arrived at some weeks ago, as previously noted in these columns. This makes sixteen of the principal grain carrying roads in the state of Illinois which are now in the agreement.

Special attention is directed to the changes in the Trade Rules of the National Association now ready for distribution to the trade by Sec'y Courcier at Toledo. It should be observed that calendar days have been substituted for business days; and that the arbitrary terms "immediate," "quick," and "prompt," have been superseded by "three," "five," and "ten days." All members should urge the adoption of the Trade Rules in their entirety by their local exchanges and associations.

In the matter of the moisture tests of corn, which was so disastrous to country dealers last winter by reason of the excessive discounts, the trade will be glad, writes Sec'y Strong, to learn that through the active work of the officers and committees of the Illinois Association, after three hearings before the Railroad and Warehouse Commission at Chicago, the board by unanimous action, amended Rule No. 5, as to the grading of No. 3 corn, to read as follows: "The following maximum limits shall approximately govern all inspection and grading of corn: Provided, that in no instance shall the variation exceed one-quarter of 1 per cent; and further provided, that said variation allowed under such amendment to the rule, applies to the grading of No. 3 corn." "This action of the Commission is only another evidence of the worth of organization among grain dealers. When exerted, their influence is paramount. This change in the rules will save the dealers thousands and thousands of dollars during the coming two or three months, when corn carries such a heavy amount of moisture."

Sec'y J. Vining Taylor reports the following additions to the membership of the National Hay Association: Justis, R. A., receiver and shipper, Manchester, Va.; Hutter, C. S., dealer, Lynchburg, Va.; Lynchburg Seed Co., dealers, 100 Ninth St., Lynchburg, Va.; Blackman & Stanton, wholesaler, Freeville, N. Y.; Buft, L., shipper, Richfield Springs, N. Y.; Crozier Grain Co., W. H., receiver and shipper, 139 N. 1st St., Nashville, Tenn.; Rhoten & Roberts, shippers, Mowrystown, O.; Pomeroy, Chas. C., dealer, East Liverpool, O.; Showalter, Abraham, shipper, Keystone, Ind.; Sparling, W. T., shipper, Tyre, Mich.; Berg, John, dealer, Sturgeon Bay, Wis.; Clark Grain Fuel Co., shippers, Chippewa Falls, Wis. He reports also the following corrections to the printed list of members: Duncan & Co., W. S., Atlanta, Ga., should read Duncan-Hodnett Grain Co., and W. C. Agee, Selma, Ala., should read R. H. & W. C. Agee.

### INDIANA WINTER MEETING.

The regular winter meeting of the Indiana Grain Dealers' Association will be held at Indianapolis on January 17 and 18; headquarters and meeting room—Board of Trade Assembly Room.

### EXCURSION TO NEW ORLEANS.

It is probable that the Kansas Association will arrange for an excursion following the close of the next annual meeting, prior to Mardi-Gras and the carnival season which takes place in New Orleans during the last week of February, 1911. This would necessitate holding the meeting in Kansas City on February 22, 23 and 24. The train would leave Kansas City on Friday night, arriving in New Orleans on Saturday night, and remain there until Tuesday evening, Mardi-Gras, which closes the carnival season, and is the great day of all. Leaving New Orleans on Tuesday evening, the train would reach Hot Springs on the following morning, remain there until Wednesday evening, reach Memphis on Thursday morning, spend the day there and reach St. Louis on Friday morning, and leaving there on Friday night, arrive in Kansas City, Saturday morning. Mr. Smiley expects to be able to secure a round trip rate, including use of standard Pullmans, for about \$38. Travellers would occupy

the Pullmans, thus saving the expense of hotel bills, on the entire trip. Before making these arrangements, the officers must know the approximate number who would make the trip, as they must guarantee 200 passengers to enable them to secure a special train. Those who have never visited this southern country will not be likely to have an opportunity of making the trip with as little expense as on this occasion.

### RESOLUTION OF RESPECT.

The following resolution has been adopted by the executive committee of the National Hay Association:

Whereas, Almighty God, exercising His divine right, has taken from our midst our friend and fellow member, William M. Reid of Bucyrus, Ohio, who by his faithful adherence to the doctrines of this Association, and by his untainted character attained for himself the highest regard and respect of the members of this organization and the citizens of his home; therefore be it

Resolved, That in the death of this most excellent man this Association has lost a valuable member, the trade an esteemed accessory, and the business world at large a citizen whose place will be hard to fill; his family has lost a loving husband and father, and there is sorrow among those left behind; but when we consider his life in its entirety, that sorrow must be lessened by the sweet thoughts of welcome songs of the angelic hosts; therefore, be it further

Resolved, That copies of these resolutions be sent to the trade papers, and a copy to his family.

### LIMA DISTRICT DEALERS.

The corn situation in this district was the main cause of the informal meeting at the Lima House, Lima, O., on November 14 of sixty hay and grain dealers, drawn from the surrounding country within a radius of thirty miles. The meeting began at 11:30 a. m. and lasted until 4:30, an intermission being taken for dinner at 12:30.

In the morning L. L. Cass, the grain expert of Weston, Ohio, made a moisture test of samples of new corn raised in this district, using the United States standard moisture tester. These tests showed the presence of moisture to the extent of 22 to 28½ per cent. Under present conditions of moisture, corn can be shipped safely only on the ear.

In the afternoon a number of subjects were formally presented and full discussion followed in each case. J. W. Edwards of Gomer spoke upon "Conserving Natural Resources as Applied to Fertility of the Soil," especially emphasizing the importance of using only good seed. T. A. Morrison of Kokomo, Ind., had the subject of "Protecting the Interests of Farmers and Elevator Operators with Respect to Transportation and Marketing Problems." He urged co-operation of farmers and shippers. This was the most vigorously discussed question presented, outside of that relating to the condition of corn.

Charles T. Pierce of Van Wert addressed the meeting on the subject of "Honorable and Equitable Practices in Trade," advocating the complete abandonment of short weight and other out-of-date methods of gaining advantage.—Lima Gazette.

### THE NATIONAL ASSOCIATION AND THE SOUTH.

"At the late annual convention of the Grain Dealers' National Association, held in Chicago the South, as a section, was given recognition in a way that the Southern people will doubtless appreciate," says the Nashville Banner. "The scope of the Association is national, as the name implies, and the work it has done in grain circles in the last ten years has practically revolutionized the methods under which the grain business is conducted. The Trade Rules of the Association are made to embrace every feature of grain contracts, and these Rules are recognized as grain law. It is now practically an unheard of thing for grain men of any prominence to get into any lawsuits; all of their differences are submitted to the Grain Dealers' National Association for arbitration; and it is a matter of pride in the Association that no decision has ever yet been rendered which was not complied with to the letter by the loser. Further than this, even the Supreme Court of the United States, in some of their decisions, have referred to decisions of the Grain Dealers' National Association in similar cases, as a reason for their decision, supported, of course, by the law of the land.

This work heretofore has been conducted largely throughout the Eastern, Northern and Western states, . . . [but] Mr. John F. Courcier, secretary of the association, recently made a trip, visiting a number of the principal points in the South and secured about one hundred members for the Association. As this work becomes better understood by the Southern dealers, it will no doubt result in much good in the way of preventing misunderstandings and disputes and bring Southern dealers in closer touch with men at the fountain head of the grain business."

## FIELD SEEDS

Texas seeds men report an unusual inquiry already for high-grade seed corn.

N. L. Willet Seed Co's. (Atlanta, Ga.) cotton seed catalogue, 16 pp., is now ready.

The new plant of the Waldron Seed Co. at Waterloo, Ia., is completed and in use.

The Des Moines Seed Co. has been organized by K. H. Guthrie at 409-411 E. Fifth St.

The Michigan Corn Improvement Association will hold its annual meeting at Lansing on January 17-18.

An Ohio seed corn dealer reports orders on his books now for 20,000 bus. of field corn seed for next spring delivery.

In case grass seed is received misbranded, it is the duty, moral and legal, for the receiver to report the fact at once to the shipper for adjustment.

The sixth annual session of the Kansas Corn Breeders' Association will be held December 28-30, at the Agricultural College at Manhattan, Kan.

A Kansas frost of October 21 and 22 did considerable damage to kaffir in Coffee County. For feed the grain is all right, but much of it is unsafe for seed.

Minneapolis will for the rest of the season until spring take most of the Northwestern flaxseed, having on November 29 began paying the premium over Duluth.

Germany takes most of the seeds (fenugreek, coriander and flax) exported by Morocco. Shipments of flaxseed are brisk; owing to the high prices realized.

Soya beans imported at Hull, England, amounted to 230,054 tons to October 22, against 152,355 tons to same date of 1909. About 10,000 tons were booked to arrive in November.

The Ames, Ia., station reports three new wheats, one a spring wheat, that gave this season 56, 63 and 64 bus., respectively, and Silver mine oats that yielded 92 bus. per acre.

The annual meeting of the Indiana Corn Growers' Association will be held at Purdue University, Lafayette, on January 11. The annual corn show will be held during the winter "short course."

The British Consul at Mukden, Manchuria, says the soy bean harvest in both northern and southern Manchuria is excellent—larger by 20 to 30 per cent than last year in quantity, while the quality also is better.

The Duluth Herald's estimate of the flaxseed crop of 1910 is 10,202,000 bus. in the Northwest and 12,047,920 bus. in the whole country, against 14,369,000 bus. in the Northwest and 15,858,000 bus. in the whole country as reported by the Government.

J. L. Harper of Waitsburg, Wash., has developed a new extra hardy wheat, similar to Club but with a harder berry. It has not been identified by the Washington experts. The original was obtained from twelve stalks found in a 1,020-acre field.

It is announced that the seed testing laboratory of the Nebraska Experiment Station at Lincoln is now open and is prepared to test seeds of all kinds for purity and germination. This work is done absolutely free for the farmers and seedsmen of Nebraska and adjoining states. The pursuit of such a generous policy means much to the farmers and millers of that state.

Lenus Hagglund, living two miles north of Essex, Ia., has erected a building for the purpose of taking care of seed corn. It is fitted up with controllable ventilators at bottom and top and is equipped with a heater to protect seed against frost. The ears are laid on shelves built in sections. Mr. Hagglund is a farmer who specializes in seed corn and has taken honors at several fairs and shows in Iowa.

The country clover seed situation is best told by the following incident: Some seed delivered December 3 on December contracts is being taken home to Ohio points that two years ago supplied this market with twenty-five cars of seed; and with such a condition confronting us, where is the seed to come from (1,000 bags per week) if the country hasn't it? From abroad? Well, that story has about run its course; they are no better situated over there than we are here.—Crumbaugh-Kuehn Co., Toledo.

The Indiana Grain Dealers' Association, through the President, W. B. Foresman, of Lafayette, has presented a handsome silver trophy to the Indiana Corn Growers' Association, to be awarded annually for the best sample of oats exhibited at the State Show to be held at Purdue University. This trophy is a valuable addition to the many premiums to be offered at the state show and will do much to bring out exhibits. Its presentation is another step towards the improvement of the grain crop and to identify the grain dealers with an importate state movement. The State Corn and Small Grain Show



will be held January 9-14 and every farmer should arrange to exhibit a sample of corn, oats or wheat.

What is said to be the first consignment of foreign flaxseed that has been received in Chicago in merchantable quantities in more than thirty years reached the city in November in the shape of a 15-car lot of Calcutta seed. It was routed via New Orleans and was brought into Chicago by rail.

A "presidential decree" of October provides for the temporary admission into France, free of all custom house charges and duty, of soy beans, camelina, and beech nuts in the husk destined to be converted into oil. The importers must bind themselves, under heavy security, to re-export or place in bonded warehouse, within six months, the oils derived from the seeds imported. The yield of oil is fixed at 12 per cent in the case of soy beans, 26 per cent in the case of camelina, and 22 per cent in the case of beech nuts.

The speculative demand for spring sowing seeds in England is quieting down, say Picard & Co., London. With the change in the weather, the new English reds are coming out more freely, showing clean samples. New French reds on offer all qualities, prices reasonable. Alsikes unchanged in Canadian and American seed, prices moderate. Whites scarce and high in price. Trefoils scarce and rising. In grasses French-Italian, Irish-Italian and perennials all show fine samples with reasonable prices, but little business passing.

Under date October 25, Henry Nungesser & Co., 1203 Hudson St., Hoboken, N. J., have issued a wholesale price list of grass and clover seeds. Prices are quoted by the cental, not by the bushel. As to prices in general they say: "Nearly all crops are short this season. Prices are higher than usual, caused in most cases by short crops and in others by more or less speculation; the demand for better qualities may also have had some bearing on the situation. Nevertheless, the fact is, on an average, grass seeds have never been so high in the history of the seed business as this season."

In connection with the present high prices prevailing for flaxseed it is worthy of note that they are record prices, that is going back for seventy-five years. During the time of the Crimean War, when Russia was about the only source of supply, the price of Black Sea seed reached 80 shillings per quarter, about \$2.67 per bushel. But that these were war prices is evidenced by the fact that the low price for the same period was just half that. In 1866 prices again reached a high level, about the present one 70 shillings, or approximately \$2.34 per bushel.—Duluth Commercial Record.

The first mustard market of the season at Peterborough, England, was held on October 15, when \$2.40 to \$3 per bushel was paid for best quality seed, the highest price for years. "Mustard," says a Peterborough writer in *Milling*, "was unknown to English farmers 175 years ago. A certain Mrs. Clements, of Durham, was about the first to grind the seed, and she guarded the secret and obtained a monopoly of the product for some years. It was introduced by George I. to the Royal Table; and after this, few could eat their beef without the 'Durham Mustard,' as it was then called."

An enthusiastic citizen of Butler County, Kan., said recently to a Wichita reporter: "In Butler County we have a kaffir corn crop this year that will be worth a million dollars. The acreage this year is much larger than it has ever been before and next year it will be still larger; I am quite sure that it will be at least a third larger and it may double. The yield this year is from 10 to 50 bushels per acre. Growing kaffir corn as a seed crop is comparatively new. In the years past kaffir corn would not bring as good a price as corn. Now the situation is reversed and kaffir corn is worth more."

Of the pure seed laws, Henry Nungesser & Co., Hoboken, says: "Although there has been a great deal of agitation along these lines recently, the fact still remains that the purity of grass and clover seed will not, and moreover cannot be improved, no matter what stringent laws may be enacted; and while the reports of seed tests are often very damaging to the seed trade in general, they do not result in any good to anybody. For all that, we do not for a moment hesitate to go on record and state that there is no country in the world that handles, on an average, such high qualities of grass and clover seeds as the United States."

Carleton R. Ball, in charge of sorghum investigations, U. S. Dept. of Agr., commenting on some heads of white durra, a distant relation of milo-maize, sent him from Texas two years ago, says the durra is "earlier and rather more drought-resistant. The reason that I have not distributed it is because the seed shatters quite badly when ripe and the crop has been unsatisfactory for this reason. I have been working for a number of years by selection, but without very much success. I have, however, produced some hybrids of this with the ordinary blackhull kaffir which are giving great promise, and I have some other varieties of white durra which do not shatter. They were, however, rather large and somewhat late when first secured, and I have

been selecting them vigorously for earliness and dwarf stature. One of them is now becoming one of the most valuable varieties I have and I expect to begin the distribution of the seed over the plains country in the fall of 1911."

"There is too much enthusiasm over pretty ears or show corn," said W. A. Lloyd of the Ohio Exp. Sta., recently, "and what the Corn Improvement Association wants to do is to get right down to the level of corn growing and stimulate the production of a large economic yield per acre. The kind or variety of corn to be grown must be determined by each locality for itself, and we hope to see the farmers get away from the idea that they must raise pretty or fancy corn. The utility score card, used for the first time this year, which gives 90 points to yield and only 10 points to type, is attracting much favorable comment."

R. Liefmann Söhne Nachf., Hamburg, under date November 4 say that the red clover was destroyed by wet weather in both Germany and Austria. Hungary has only "a very weak average crop"; Italy, "below an average"; Russia, a "full average"; France, "very good average"; England, "half an average crop"; Chili, "small yield." "To size up the general situation, will say that these average or full average crops of some countries in Europe are faced by a very considerable consumption. With old supplies extremely depleted and the major part of this year's qualities very nice in color,—though containing more or less buckhorn, except seed of Russia origin,—our retailers consider values, which went down in general owing to better crop prospects in Europe, as not being high. We ourselves consider present values reasonable and justified by prevailing conditions."

#### A HUSKLESS OAT.

A new huskless oat, imported by an English grower from western China, did so well during the last season, that a Cornwall expert tells *Milling* that, "By careful selection spread over a few years, we may hope to get larger grain, of less length in proportion to breadth, and also plumper grains, with less of the longitudinal cleavage. The serviceability of these huskless oats needs no demonstration; like the proverbial egg, they are 'full of meat' and pure food 'straightaway.'"

As is generally known, the oat of all cereals has the greatest proportion of husk, 25 per cent in poor samples of Russian and Argentine being common. It is a curious fact that the Nude oat, as the *Avena nuda* is called, was a well-known sort in the British Isles in the days of the Stuarts, and was apparently very much the same as that brought from China. It had a British name, the "pilcorn," but it was apparently allowed to die out. Professor Macalpine says that its rapid degeneration was the cause. A contemporary says: "We see no reason why from the best grains of each season the next year's seed oats of *Avena nuda* should not be set aside or why the wit of man should not gain ground instead of losing it. Man, on the whole, moves faster forward in selection than Nature works backward in type reversion. Science is leading to an increased use of oats for human food, for poultry food, as an item in mixed rations, and as an article for fermentation."

"We have an idea," adds *Milling*, "that Messrs. Garton, the noted cross-breeders of cereals, grasses, clovers, etc., when they were conducting experiments at Newton-le-Willows, evolved a huskless oat of rather fine quality, but whether they have continued to cultivate it we do not know."

#### DAMAGES FOR SALE OF DEFECTIVE SEEDS.

An interesting case was tried recently in an English court, in which the defendant, a farmer obtained a judgment against the complainant, a seeds merchant, on a claim that the seed delivered was bad. The facts are substantially these: The plaintiff, an introducer of French seed wheats, sold defendant a quantity of "Sensation" wheat, to be delivered in March. At that time the seed was shipped and an "invoice" rendered, on which in addition to the usual statement of the terms, there was printed in small type, "C. W. M. [complainant] gives no warranty as to description, quality, productiveness, or any other matter, of seeds or seed corn, and is not in any way responsible for the crop." The bill being unpaid, the seeds merchant sued for £13, 15s., and the defendant counter-claimed a loss of £48.

The court examined at length the question whether the notation on the "invoice" quoted relieved the seller of the liability therein claimed, and held that such printed disclaimer was not in law a sufficient notice to that effect, in view of their mutual understanding as to quality when the sale was made in November previous to the delivery. The court held that such an "expression of a custom of the seed trade" could not be read into this particular trade, since the custom was unknown to the defendant and "does not exist in relation to farm seeds. If it did prevail it would resemble a cancer rather than a custom. It would eat the heart out of con-

tracts. It would, for example, change the very substance of this transaction from a sale of seed for sowing to a sale of grain for grinding. No sane man would give 50 per cent above the market price for wheat for that purpose," etc.

The "Sensation" wheat did not germinate; and the court held that the farmer defendant was "entitled to be paid for his extra work and labor in resowing"; but his claim for reimbursement for "the difference in value between a crop of ordinary spring wheat and a crop of autumn-sown Sensation, which might have served to renew his seed next year," is rejected as "too problematical and too remote."

The court allowed the plaintiff £1, 7s. 6d. (without costs) and the defendant £17, 10s. on counter claim with costs.

#### THE CORN SHOWS.

The Pennsylvania Seed Improvement Association announces a show of corn and other grains during Farmers' Week, which will be held at State College, on December 19 to 24, inclusive. Competition for prizes will be open to all residents of Pennsylvania and no entrance fee will be required.

The College of Agriculture of West Virginia University, Morgantown, will hold a West Virginia State Corn Show at the College on January 5, 6 and 7, 1911. The premiums are offered under the joint auspices of the College of Agriculture, the West Virginia University and the State Board of Agriculture.

#### NEW ENGLAND CORN SHOW.

The New England Corn Show at Worcester, Mass., in November, the first of its kind in the New England States, was an entire success, the exhibits of corn and other grains being far in excess of expectations and attracting many visitors from the farms. The main prizes were won as follows: The grand prize of \$500 for the crop of shelled corn showing the largest yield, on a water-free basis, in food constituents, obtained from one acre grown exclusively on fertilizer, was awarded to Perley E. Davis of Granby. His yield at harvest time was 127 bushels shelled corn, which reduced to 12 per cent moisture, the average in crib-dry shelled corn, was found to equal 103.23 bushels of shelled corn. The next highest yield of crib-dry shelled corn was 95.78 bushels. Mr. Davis is a practical commercial farmer and a graduate of the Massachusetts Agricultural College, class of '94. He applied 1900 pounds of Stockbridge corn manure per acre. The seed was eight-rowed yellow flint, planted in drills three feet apart, one kernel every 8 to 10 inches. The suckers and weeds were all removed and missing plants filled in by transplanting. It was a perfect stand.

The other Bowker prizes were awarded as follows: Flint corn—First prize, \$100, for 95.78 bushels grown by A. T. Hathaway of Monmouth, Me.; second, \$75, for 94.79 bushels grown by L. S. White of Collinsville, Ct.; third, \$50, for 89.36 bushels grown by Samuel Carr of Southboro; fourth, \$25, for 86.90 bushels grown by Arthur J. Guptill & Sons of Berwick, Me.

Dent corn—First prize, \$100, for 86.46 bushels (133 bushels at harvest time) grown by Butler Bros. of Montello; second, \$75, for 75.39 bushels grown by Middlebrook farm of Dover, N. H.; third, \$50, for 68.25 bushels grown by M. H. Williams of Sunderland; fourth, \$25, for 54.31 bushels grown by John P. Bowditch of Framingham.

A gratuity of \$100 was awarded to George E. Stickney of Newburyport for the largest field and yield of Stickney corn grown exclusively on Stockbridge corn manure. The field measured nine acres and the crop amounted to 819½ bushels, or an average of 92.19 bushels of shelled corn an acre at harvest time.

The best ear of corn sold for \$50 and \$1,000 was realized by sale of show corn.

#### THE COUNCIL BLUFFS SHOW.

There were over 600 exhibits at the Corn Show at Council Bluffs in November, including several state and county exhibits. The grand champion ten-ear exhibit made by Pierson & Wilson of Silver City, Ia., was sold to Robert B. Wallace, Council Bluffs, for \$105. The champion single ear, exhibited by Frank I. Moore, a farmer boy of Sargent's Bluffs, Ia., was purchased by George F. Hamilton of Council Bluffs for \$25. This ear is considered as good as the National Corn Show prize winner of 1909, and will be shown at Columbus in January-February.

Charles P. Braslan, one of the largest seed growers in the world, died December 3 in San Jose, Cal., where he had lived since 1897. Mr. Braslan was born in Cambridge, Mass., in 1861, and in early life entered the seed business in Boston. In 1884 he went to Minneapolis and formed the firm of Northrup, Braslan & Goodwin, which was in existence until 1896. At that time Mr. Braslan went to Chicago but soon left for California where he had a farm of 4,000 or 5,000 acres devoted to seed raising. Deceased is survived by a wife and four children.



## TRANSPORTATION

The new demurrage law of New England went into effect on December 1. It allows 48 hours of free time, except that grain, coal and lumber will be allowed 72 hours.

A traffic bureau has been organized at Nashville, Tenn., by A. Rothschild, Hamilton Love, and others. An expert freight man will be employed to look after the shippers' and the city's interests.

It is expected that rates on grain and flax from North Dakota points to Chicago will be increased on and after February 1, I. C. C. permitting. The proposed increase would be about \$24 per car.

Minimum car weights on domestic car load shipments of barley-oats mixture, when the proportion of barley is not over 25 per cent, will be 48,000 lbs., effective Jan. 1. The Official Classification basis of minimum rates of grain in bulk, sacks or barrels will be: Wheat, 60,000 lbs.; corn, rye and barley, 56,000 lbs. and oats, 40,000 lbs.

It is now proposed that the Erie Canal next season be opened on or about June 1, fifteen days late, and closed on December 1. It is urged that as in May there is little boating, a delay would harm no interest, whereas if the season was extended from November 15th to December 1st the amount of business would be greatly enlarged.

The National Association of Railway Commissioners on November 17, at Washington, elected new officers for the coming year as follows: J. Hudson Burr, of Florida, president; vice-presidents, Staples, of Minnesota, and Goethlin, of Ohio; secretary, W. H. Connolly, of the Interstate Commerce Commission. The next meeting is to be held in Washington, D. C., November 10, 1911.

Murphy Bros., dealers in hay, straw, grain and feed in New York City, have complained to the Interstate Commerce Commission of the demurrage rules in effect on the lines of the New York Central & Hudson River Railroad. The rules, it is said, permit the shipper 48 hours of free time, but the carrier has refused to allow for bad weather during which the cars could not be unloaded.

The Deep Waterways Association convention at St. Louis on November 25 and 26 was a rather stormy affair, owing to a conflict of opinion on the question of the Illinois River ship canal, between Gov. Deneen and Senator Lorimer; but the convention adopted resolutions urging this work on the attention of Congress. The 14-ft. channel was endorsed in place of Mr. Lorimer's 25-ft. scheme.

The Interstate Commerce Commission on November 11 listened to arguments in the case of W. S. Duncan & Co. et al., vs. the Nashville, Chattanooga & St. Louis R. R. Co. et al., involving what is known as "elevation allowances" to dealers in hay, grain and grain products at Nashville, Tenn. This is a re-argument of a case in which the Commission issued a decision on June 24, 1909, declaring the rates unlawful.

The long and short haul principle was argued before the Commerce Commission at Washington on November 28. The new law prohibits any railroad from charging or receiving a greater compensation for transportation for a shorter than for a longer distance; but upon application the Commission may waive this prohibition, and in special cases may even permit a lower charge for a greater than for a shorter distance. The inquiry was for the purpose of developing the opinion of railroads and shippers as to the kind of transportation which fell under the general prohibition of the law.

The E. St. Louis reconsignment rate of 2c per 100 lbs. on hay shipments originating at points east, north and west thereof and destined to the Southeast has been held to be unjust and unreasonable by the Interstate Commerce Commission, who think the charge there should not have exceeded 1½ cents per 100 pounds. In the case on hearing the Commission awarded reparation accordingly, to the amount of \$1,809. As, however, the 2-cent rate on which these claims arose was entirely eliminated by the railroads on November 15, and there is now no charge exacted for this service at East St. Louis, the ruling has now only an academic interest.

### MISSISSIPPI VALLEY DEEP WATERWAY.

The fifth Deep Waterway Convention was held at St. Louis on November 25 and 26. There was considerable friction in the convention between the 14-ft. proposition of Gov. Deneen of Illinois, and the 25-ft. proposition of Senator Lorimer, but the former won out in the resolutions by a compromise, the sixth resolution reading as follows:

"Impressed by the fact that all our canals as first projected or constructed have been found too small to meet the commercial needs of later generations, we agree that any waterway improvements now undertaken should be planned to meet prospective no less than present requirements; we demand that the plans for a waterway connecting the Great Lakes with the Gulf as the main artery of our navi-

gation system provide for an initial depth of not less than fourteen (14) feet, with lock sills and other permanent structures adapted to a depth of not less than twenty-four (24) feet; and we hold that the advocacy of any less depth by Federal engineers has arisen in a desire to circumvent our efforts and defeat our main purpose of improving transportation by an adequate system of commercial navigation."

### ORDER RE MISDATING OF B/Ls.

In a special order issued by the Commerce Commission on December 2, that body says:

"On the 20th day of January, 1910, this Commission issued an order in the following terms:

"It is ordered, That all carriers subject to the Act to Regulate Commerce be warned that a false entry as to date, or otherwise, upon a bill of lading, is a misdemeanor within the meaning of Section 20 of said act, and that in case of any such false entry hereafter arising, criminal prosecution of those responsible therefor will be requested."

"An investigation by the Commission has developed the fact that certain rail carriers at Chicago and at other points are issuing bills of lading showing a date prior to that upon which shipping instructions are received by the carrier. These bills of lading purport to show that cars are in course of transportation to named consignees on a date prior to that upon which such consignees are indicated to the carrier. In specific cases brought to the attention of the Commission this has resulted in loss to buyers of property through the presentation of such bills of lading as proof that shipments had been made on contract days, although such shipments had not been ordered forward until some days after the date shown in the bills of lading. Therefore,

"It is further ordered, That all carriers subject to the Act to Regulate Commerce be warned that not only must property to be transported be in the possession of the carrier issuing bill of lading therefor at the time of such issuance, but such bill of lading must be dated as of the day upon which the shipping instructions are fully given and the carrier finally authorized to forward the property."

### TRACING LOST SHIPMENTS.

In the course of an address to the National Traffic League, W. E. Beecham of the C., M. & St. P. Ry., makes some general suggestions upon the method of tracing shipments that may be useful to grain shippers, although the paper was not prepared for their particular benefit or instruction. Among other things Mr. Beecham said:

"If there is one thing more than another that makes the tracing of freight burdensome and vexatious and retards and interferes with the successful prosecution of the work, it is the duplication of requests, by that I mean taking up a case with several different officials of a railway. The shipper writes to one official, say the general freight agent, and the consignee takes the case up with the division freight agent or the division superintendent, or perhaps the local agent, or all of them, and not getting the results desired or expected, some one interested in the case may take it up with one or more assistant general freight agents, and several of the transportation officials may get into the game, and then they all fall upon the tracing department, and each and every one of them expects an answer. This forces the tracing department to make from four to six replies in many cases where one should suffice. This is not the fault of the shippers altogether; the railroads are equally at fault; but I think there is a remedy for all these difficulties; and, having shown, I think, to your satisfaction, that tracing as it is now done does not please anybody, I want to make a few suggestions:

"The consignee should be the person to institute a tracer for a shipment, if such action is necessary. If the shipper desires to keep in touch with the shipment and know the date of its arrival at destination, he should advise the consignee of the correct date of departure from point of origin and furnish him with the correct number of the car and its correct initials, and should give him besides the full routing of the shipment, when necessary, and should then request him to report the arrival of the shipment. If, after a reasonable time has been allowed for the shipment to reach its destination it does not arrive, the consignee should start his tracer with the terminal line. At outside agencies the commercial agent is the representative of the railroad in his territory and is the man to whom consignee should apply to trace shipments. He should, however, trace only upon the request of the consignee, not upon request of shipper.

"When making shipments I wish to particularly urge upon you gentlemen the necessity for furnishing the consignee accurate information as to car initials and numbers, being particularly explicit as to exact date of shipment. [For obvious reasons the exact date of shipment is not infrequently misrepresented—given an earlier date than is the fact. See special order of the I. C. C. of Dec. 2 above.]

"A matter which I have in mind developed that a shipper had given information of sundry cars for points west of the Missouri River, but our investigation developed that the cars in question were loaded and consigned to points in Alabama and Georgia. Several days after the consignee was given the numbers of the cars which went south, and which we were tracing, and the other cars in which his shipments actually moved he never had any advice of; and our investigation only developed these facts.

"If shippers will assume their share of responsibility in matters of this kind, some of the delays which now occur will be explained away and the railroads will be relieved of responsibility for the same.

"When a tracing department notifies a shipper that freight is delayed, explains the cause, tells what it can do, and reports probable arrival of freight at destination, it should be considered the same as coming from the highest official of the railway.

"Railroads should insert in publications, which reach the shipping public, the name of the party in charge of the tracing department, and all requests (telephone, telegraph and letter) to trace, expedite and report upon freight should be addressed to that department.

"If these suggestions, which, I think you will admit, are reasonable, are followed on the part of the shipping public, it will go a long way towards making the tracing department what it should be, a very useful and valuable bureau of information to the public."

### THE NEW ENGLAND DEMURRAGE CODE.

In approving the New England Demurrage Code (substantially that formulated by the National Convention of Railway Commissioners of 1909), the Commerce Commission, first of all, endorsed the principle of "uniform demurrage rules" throughout the United States, "except in so far as local conditions might interfere."

The Commission says the cutting down of free time from 96 to 48 hours (72 in the case of grain) is off-set by other rules of the Code, such as, for example, a "bunching provision relieving against hardship from irregular delivery of cars; an average provision by which shippers may save, through the prompt unloading of cars, credits which are applied against overtime in the unloading of other cars; and a weather provision which is of much importance in New England. It is our belief that the new rules, applied in a proper spirit, will result in less inconvenience to and in the payment of less demurrage charges by the shippers of New England than under the old regulations."

The Commission heard testimony on the point that New England conditions are "peculiar"; but nevertheless concluded that "New England should be able to operate under the same demurrage code which prevails in other parts of the United States and in the Dominion of Canada; but we desire to be certain of our ground before taking final action," and if later it should turn out that the "peculiar" conditions really require a modification of the rules, such modifications will be considered. But the Code is primarily based on the fact that, "The business of a railroad is transportation, not storage. The service of a railroad can not be efficient unless its cars are promptly released. If a car is detained by a particular shipper for a longer period than is necessary for loading or unloading, the efficiency of the railroad is to that extent diminished, and every other shipper is to the same extent prejudiced. We urge that shippers co-operate in giving a fair and intelligent trial of these regulations."

### APROPOS CLAIM ADJUSTMENTS.

A committee of the National Association of Railway Commissioners made a report during the annual meeting at Washington (November 18) in which both shippers and carriers were criticised for their attitude toward equitable and prompt adjustments of valid claims. It is suggested to the shippers that a want of frankness on their part not infrequently results to their disadvantage (1) in the rejection of valid claims and (2) in delays in investigation and adjustment. The latter condition discourages many innocent people from making any claims, however meritorious, while others who suffer in like manner, while making claims, attempt to recoup themselves in other and illegitimate ways.

"A carrier is warranted," says the report, "in requiring that claims be accompanied and supported by evidence of validity; and it may properly establish reasonable rules governing the manner of the presentation of claims. But it need scarcely be said that such requirements should affect all shippers alike, whether their business be great or small, or whether they be located at 'competitive' points or elsewhere. The shipper cannot complain if his claim is promptly returned to him for necessary information which is peculiarly within his power to give, and no delay caused thereby can be charged to the carrier. But it is believed that much of the



delay of which complaint has been and is being made is due to the defective methods of the carriers, and that overwork, carelessness, and incompetency are factors even more influential than are defective methods. Investigators employed in claim offices are frequently so burdened with the mass of work that speed becomes to them more important than accuracy or thoroughness; their work is of course superficial, and claims must be repeatedly returned to them for information which should have been obtained in the first instance. In the many transfers of papers and the general confusion attending such methods not a few files are lost, necessitating duplication. At railway agencies, especially the smaller, where the tenure of the individual agent is usually brief, defective records, lack of personal knowledge, and a feeling of irresponsibility, as well as overwork, are fruitful sources of delay and defeat in the investigation of claims. The difficulties are increased when the nature of the claim requires investigation through other carriers. Under the rules of the Freight Claim association, of which most of the carriers in the United States are members, direct investigation with foreign lines' agents is permissible, but the provision is not mandatory, and, as before stated, investigation through agents is often unsatisfactory.

"Respecting the settlement of claims in which more than one carrier is interested, the Interstate Commerce Commission has expressed itself as follows:

"We are advised that the delay in making repayment (of overcharges) is frequently due not to the failure to discover the overcharge, but to the efforts of the delivering carrier to ascertain before making the refund to the shipper which carrier participating in the movement is responsible. This is not a proper practice. The shipper is entitled to repayment from the carrier that has collected the freight charges as soon as it appears that an overcharge has in fact been made. When the refund has been made it is then that carrier's duty to see which of the carriers that participated in the movement is responsible and charge it accordingly. When the overcharge has been discovered it should immediately be repaid by the carrier that collected the charges, and this should be done whether a demand has been presented by the shipper or not." (Tyson & Jones Buggy Company vs. Aberdeen & Asheboro Railway Company et al., decided December 7, 1909.)

"The observance of this principle in the practice of carriers will no doubt result in a substantial reduction in the number of claims and avoid much of the complaint that is now justly made. It is well known that many thousands of dollars of so-called 'overcollections,' for which, through oversight, ignorance of facts, or for other reasons, no claims are presented by shippers, are annually absorbed in the freight revenues of carriers.

"While thus criticising the carriers, the fact is not lost sight of that the shippers are not blameless in the creation of the present conditions. In many cases claims are presented with full knowledge on the part of the claimants that they have no valid foundation; and in many other cases the amounts claimed are knowingly in excess of the amounts justly recoverable. Thus, through unjust and inefficient treatment on the part of the carrier and unjust claims on the part of the shipper, both have come to approach the matter of claims in an antagonistic and retaliatory spirit, which will only be dispelled by a realization on the part of both that undue advantages obtained through claim settlements are as obnoxious to the law as any other form of discrimination."

### MILLET FIBRE AND PAPER.

From private sources it is learned that some Japanese in Tiehling, Manchuria, have started the manufacture of pulp from the millet which is grown in abundance in Manchuria, says the Boston Transcript. The promoters of the scheme have lately concluded negotiations with the Japanese authorities for a lease of land covering 1,000,000 tsubo—about 30,000 acres—for the cultivation of millet, and it is stated that at present 250,000 tsubo have been planted with millet by way of trial.

Quite recently a paper manufacturing company in Japan received from Tiehling a sample of the pulp manufactured from millet, and the paper manufactured therefrom has been found of good quality.

Japan uses over 20,000 tons of pulp of various descriptions each year, and this consumption is expected to increase in the future. The inauguration of the pulp industry in Tiehling is therefore welcomed by Japanese paper mills.

We would rather trust the old Dame to bring us out on the right side of the ledger than trust the car window crop reporters. We know something of the value of that kind of reports, because the writer did a good bit of that many years ago; and while at this writing he confesses to be full of years and sin, nevertheless, he hangs to the opinion that the wheat crop that is killed in October and November never stays dead.—Southworth & Co., Toledo.

## FIRES-CASUALTIES

Fire recently destroyed the Goff Grain Co.'s elevator at Goff, Kan.

The Farmers' Union Elevator at Gayville, S. D., was totally destroyed by fire on November 25.

The Crown Elevator at De Lamere, N. D., was destroyed by a fire of unknown origin recently.

Fire recently destroyed the Grand Trunk Grain Elevator at Port Dalhousie, Ont., entailing a loss of \$100,000.

The elevator owned by the Minneapolis & Northern Elevator Co., at Ashby, Minn., has been destroyed by fire.

The corn elevator of Keel & Son at Alex, Okla., burned recently, destroying from 4,000 to 6,000 bushels of corn.

The Croft Farmers' Grain & Live Stock Co.'s elevator at Croft, Ill., burned on November 28. The cause is unknown.

A loss of \$200 was suffered by the Raymond P. Lipe Co. of Toledo, Ohio, when its elevator at Bryan, Ohio, was injured by fire.

The 3-story building used by H. B. Moyer at Tamaqua, Pa., as a warehouse, was destroyed by fire with a loss of \$12,000.

The elevator at Orley, S. D., was saved from destruction by a train crew, who extinguished the fire before it gained much headway.

The Atlas Elevator at Kelliher, Sask., was burned to the ground recently. It contained 1,600 bushels of grain. The house will be rebuilt.

The elevator at Charles City, Iowa, which is owned by the Western Elevator Co. of Winona, Minn., was destroyed by fire recently.

The Trans-Mississippi Elevator at Ross, Iowa, collapsed recently, scattering the contents in all directions. The grain was recovered.

Fire recently destroyed the Cyrus Farmers' Elevator at Cyrus, Minn., entailing a loss of \$13,000, partially covered by the \$7,000 insurance.

Damage to the amount of \$2,000 was done to the elevator at Buffalo, N. Y., which belongs to the Husted Milling & Elevator Co. by a recent fire.

The Mart Mill & Elevator at Mart, Texas, was burned on November 26. There were 300 bushels of corn in the elevator. No insurance was carried.

A fire of incendiary origin destroyed the large warehouse at Monterey, Cal., which was owned by Roderick Steadman & Co. The loss is about \$2,000.

The Farmers' Elevator at Belmond, Iowa, burned November 10, entailing a loss of \$6,700. The plant contained 7,000 bushels of oats at the time of the fire.

Chapin R. Brackett, of the Vaughan & Brackett Co., Minneapolis grain dealers, was seriously injured recently by his automobile skidding into a tree.

A fire of unknown origin destroyed the warehouse and elevator of Kime & Gibson at Girard, Ill., causing a loss of \$5,000, only partially covered by insurance.

The plant of the Farmers' Gin & Grain Co. at West Hickman, Ky., was slightly damaged by a fire resulting from an overturned lantern in the seed room.

A large portion of the warehouse of Sitley & Sons at Camden, N. Y., was destroyed by fire November 15. The loss is estimated at \$60,000, fully covered by insurance.

The Johnson & Graham Elevator at Ames, Nebr., was destroyed by a fire on November 17, with a loss of \$75,000. The house contained 30,000 bushels of grain.

A fire in the Conley Warehouse at Island City, Ore., recently damaged the house to the extent of \$22,000, nearly 10,000 bushels of wheat in the building were destroyed.

Thomas W. Campbell, of the firm of John C. Legg & Co. of Baltimore, Md., was injured recently by having a pile of hay topple over on him in the terminal warehouse.

A. J. Caldwell, Jr., of the firm of Caldwell Co., recently injured his back by falling off a platform at the company's hay, grain and feed establishment at Wheeling, W. Va.

The elevator at Rockford, Ill., which was owned by A. L. Bartlett Co., was damaged by fire recently to the extent of from \$4,000 to \$5,000, with insurance to cover the loss.

Patrick Lahaney suffered the loss of his right leg recently, when his ankle became caught in a rope attached to a pulley in the East Side Iron Elevator at Toledo, Ohio.

The steel hopper of a shipping bin at the Consolidated Elevator in Fort William, Sask., collapsed recently owing to the weight of wheat, injuring one grain trimmer.

The Huntington Grain Elevator at Waldorf, Minn., burned November 30. Several thousand bushels of wheat were destroyed. The fire started from the stove in the office.

An elevator at Goodrich, Ill., owned by Charles Usher of Chicago and operated by Risser & Rollins of Kankakee, burned November 17 from an unknown cause. It was valued at \$2,500.

Henry Horn's elevator at Elkville, Ill., together with 7,000 bushels of wheat, was destroyed by a fire caused by a gasoline explosion on December 4. The loss is \$10,000 with light insurance.

The total destruction of the Farmers' Elevator at Clark, S. D., resulted from a fire of unknown origin which occurred on November 17. The loss is estimated at \$45,000, insurance carried about \$27,000.

Fire of unknown origin recently destroyed the grain elevator at Marietta, Iowa, which belongs to B. L. Pyle, together with the Iowa Central Depot and coal sheds, causing a loss of \$2,000, with \$500 insurance.

Sparks from a passing locomotive are believed to have been the cause of the fire which destroyed the north section of the elevator at Virden, Ill., owned by J. N. Haingrove. The loss is \$2,000 with no insurance.

William T. McLaughlin & Co. lost their grain warehouse at West Roxbury, Mass., by fire on November 16, together with a large quantity of hay and grain, making the loss about \$6,000, with very little insurance.

A fire on November 25 destroyed the elevator at Geary, Okla., which is owned by the El Reno Elevator Co., entailing a loss of \$10,000. There were 4,000 bushels of wheat burned together with three carloads of coal.

The four-story grain warehouse of the Boston Ice Co. at Charlestown, Mass., burned November 15. It contained about 3,000 bushels of corn and oats, together with a large quantity of hay. The total loss is about \$20,000.

T. A. Johnson recently suffered the loss of his warehouse at Tyler, Texas, which contained much grain and feed. The house was insured for \$2,000 and the contents for \$3,000. Loss on contents amounts to \$4,000.

The estimated loss on the warehouse and elevator at Trumansburg, N. Y., which was destroyed by fire recently, is about \$30,000. The building contained between 12,000 and 15,000 bushels of grain and 600 tons of hay.

### SETTLING A WEIGHING DISPUTE.

The appeals committee of the Cincinnati Chamber of Commerce on November 28 decided a case involving a trade dispute based on a practice which has long been a bone of contention among grain men of that city. The case is one of the ordinary affairs of daily occurrence on the floor of 'Change, but the principle established is of vital interest because of the precedent it makes.

The Early & Daniel Co. bought from the Sam Weider Milling Co. a car of oats, which had been regularly weighed and inspected. When unloaded at the Early & Daniel elevator it was found that there was considerable dirt toward the bottom of the car. The weigher sifted the oats out of the dirt and weighed the oats and then the dirt. By this transaction there was a difference of about 16 bushels between the official weight of the Chamber of Commerce and the original weight of the country shipper, the monetary difference being about \$6.

The appeals committee decided the case against the Weider Co., which filed complaint against the Early & Daniel Co., claiming the car was improperly weighed. The decision was that of the last appeals body of the Cincinnati Chamber of Commerce.

Wallace's Farmer: "We are now growing too great an acreage of corn. If we continue to do this and at the same time decrease our supply of cattle so as to rob ourselves of four-fifths of the corn market, we shall have an awakening by and by that will not be pleasant." This paragraph when changed to a Wagnerism reads: "The best friend of May 1911 corn is the steer."—E. W. Wagner Letter.

The Commerce Commission began at Chicago on December 14 an inquiry into the facts on which to base the opinion on the readjustment of rates via rail and water between Chicago and other grain shipping points on the great lakes and the East, asked for by the Chicago Board of Trade. The question at issue is that of rates charged on "ex-lake" grain consigned from the West to the Atlantic seaboard, on which it is asserted that the railroads are applying a higher charge than is just for the rail portion of the journey from Buffalo eastward when grain is shipped to Buffalo by water, while lower rates on all-rail shipments tend to rob the waterway of traffic and divert shipments to the all-rail route.



[Bureau of Plant Industry—Circular No. 72.]

# A MOISTURE TESTER FOR GRAIN AND OTHER SUBSTANCES AND HOW TO USE IT.\*

BY J. W. T. DUVEL,

Assistant in Charge of Laboratory Methods,  
Office of Grain Standardization.

The apparatus described in this circular, which is known commercially as the Brown-Duvel Moisture Tester, was originally described in 1907† in Bulletin 99 of the Bureau of Plant Industry, entitled, "A Quick Method for the Determination of Moisture in Grain," and was developed primarily to meet the demands of grain dealers for a rapid and exact method of determining the moisture content of commercial corn. Since that time some

partments, the adjustment of the thermometer, and the proper connections of the various parts.

Figures 1 and 2 show testers equipped with burners for using gas as fuel. The form of construction, however, is such that alcohol or gasoline burners can be used with equally good results, provided the burners give a pointed rather than a spreading flame and the apparatus is modified in no other way.

## THERMOMETERS.

It is of the utmost importance that the thermometers be of extra quality and not the ordinary grade of chemical thermometers which are so commonly furnished with apparatus of this general character. The success of this method of making moisture determinations depends largely upon the accuracy with which the temperature readings are made, and any thermometer showing an error of more

cloth, or some other similar substance about one end of a piece of fairly heavy wire.

## DISTILLATION FLASKS.

The special distillation flasks, with a capacity of approximately 1,000 cubic centimeters, should be made of the best grade of resistant glass and should be well annealed in order to withstand sudden changes in temperature without breaking. The necks of the flasks should be sufficiently heavy to stand tight corking. Figure 5 shows one of these flasks in which the dimensions of the different parts are given in both centimeters and inches.

In some instances dealers have supplied flasks showing such wide variations in the dimensions that they were entirely useless. It is therefore recommended that in ordering flasks it be definitely stated that they must be in accordance with the specifications given in this circular. In case the dimensions of the flasks, as well as other parts of the apparatus, are not approximately as herein specified, they should be returned.

## FLASK SUPPORTS.

The pipstem triangles originally used for supporting the flasks above the wire gauze resulted in the breakage of an undue number of flasks, and for that reason these triangles have been replaced with removable supports, as shown in figures 2 and 6. This form of support provides a good asbestos ring on which the flask rests, exposes the bottom of the flask more uniformly to the action of the heat, and at the same time is so made that a sufficient quantity of heat comes in contact with the upper part of the flask.

In adjusting these supports the asbestos ring in the top of the support should be cut so that the bottom of the flask will be not less than three-eighths of an inch above the asbestos center of the wire gauze, as shown in figure 2. The support should be 1½ inches high.

## WIRE GAUZE.

The wire gauze in the bottom of each compartment between the flask and the flame should be kept in good condition, so that the flame does not play directly on the bottom of the flask. This gauze should be made of iron wire, from sixteen to twenty thousandths of an inch in diameter, with 20 wires to the inch and with a 2-inch asbestos center, as shown in figure 7.

The asbestos center insures a more uniform distribution of heat and adds greatly to the life of the wire. It can readily be put in by mixing asbestos cement with water and rubbing it into the mesh of the gauze.

## CONDENSER TUBES.

The glass condenser tubes, with dimensions as shown in figure 8, should be so adjusted in the No. 5 rubber stoppers that when the latter are firmly

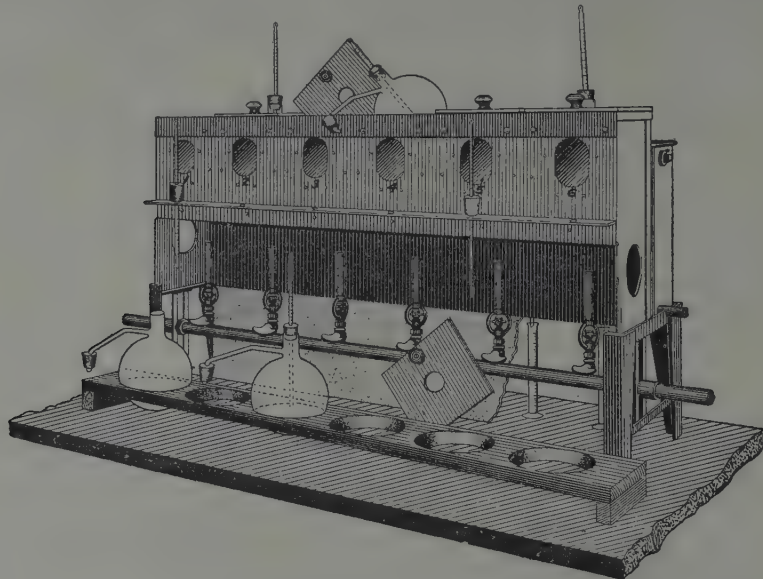


Fig. 1.—Six-compartment tester, with wooden rack in foreground.

slight modifications have been made in both the apparatus and the method, and specific instructions have been worked out for making moisture tests of the more important cereal grains and some of the more important seeds. It has been demonstrated that the method is entirely practicable for making moisture determinations of practically all substances which admit of a free circulation of the oil during the heating.

Both the construction and the process have been made as simple as possible, so that reliable tests can be made by any careful worker, even though he has not had the benefit of special training in a chemical laboratory. It is, however, of the utmost importance that the operator be a careful and honest worker who can be depended upon to follow simple instructions and to report results correctly. It must be borne in mind that the instructions given in this circular are applicable only when used in connection with the moisture tester herein described and illustrated and do not apply to modified forms of testers.

## DESCRIPTION OF THE APPARATUS.

The apparatus consists of a heating chamber divided into compartments so that a number of samples can be tested at the same time, a tank for cold water, through which the condenser tubes pass, and a suitable stand for supporting the heating chamber and cold-water tank, together with numerous accessories, such as thermometers, distillation flasks, graduated measuring cylinders, etc., all of which are illustrated and described somewhat in detail in the following pages, so that no one should have difficulty in setting up the apparatus and in making the tests properly.

Figure 1 shows an external view of a standard six-compartment moisture tester set up ready for use. Each compartment of the heating chamber is numbered and provided with a small mica window, through which the operator can observe the action within the flask while the test is in progress. Figure 2 is a cross section through one of the compartments of the tester, showing the position of the flask and the flask support within the com-

than one-half of a degree should not be used unless such errors are known and provided for in the readings.

It is also necessary that the mercury bulbs of the thermometers be of approximately the same length, so that some uniformity can be had as to the depth to which the thermometers are immersed in the oil, the correct positions of which are shown in figure 9, on page 10.

## SPECIFICATIONS FOR THERMOMETERS.

In order to secure a high-class thermometer at a minimum cost it has been found advisable to adopt a thermometer which can be used for general laboratory work. The thermometer should be graduated in whole degrees from 0° to 200° C., with the graduations etched on a stem having a white background. The diameter of the stem of the thermometer should be nine thirty-seconds of an inch, so that it will fit properly in the No. 5, one-hole, rubber stopper. The length of the mercury bulb should be approximately three-fourths of an inch—not greater than thirteen-sixteenths nor less than eleven-sixteenths of an inch. The total length of the thermometer should not exceed 13 inches.

The manufacturers should be required to furnish certificates of correction with all thermometers showing errors in calibration and graduation exceeding one-half of a degree at 175° and 190° C.

## GRADUATED MEASURING CYLINDERS.

The small graduated cylinders for measuring the moisture should have a capacity of at least 25 cubic centimeters. They should be carefully graduated in fifths, so that the readings can readily be made in tenths. When 100 grams are used for the test, the number of cubic centimeters of water in the graduate corresponds to the percentage of moisture originally contained in the sample. If only 50 grams are used, as is necessary with some substances, the number of cubic centimeters of water in the graduate is equivalent to one-half of the moisture percentage.

In making moisture determinations a small quantity of oil—usually less than one-half of a cubic centimeter—is carried over into the measuring cylinder and collects on the surface of the water, so that the readings should be made at the bottom of the meniscus between the oil and the water, as shown in figure 3. Should the oil and the water not separate readily, the graduated cylinder should be whirled by rolling quickly between the two hands.

After each test the cylinders must be cleaned and dried, which can best be done with a swab or test-tube cleaner having a small sponge attached to one end. Satisfactory cleaners can also be made as needed by twisting cotton waste, strips of cheese

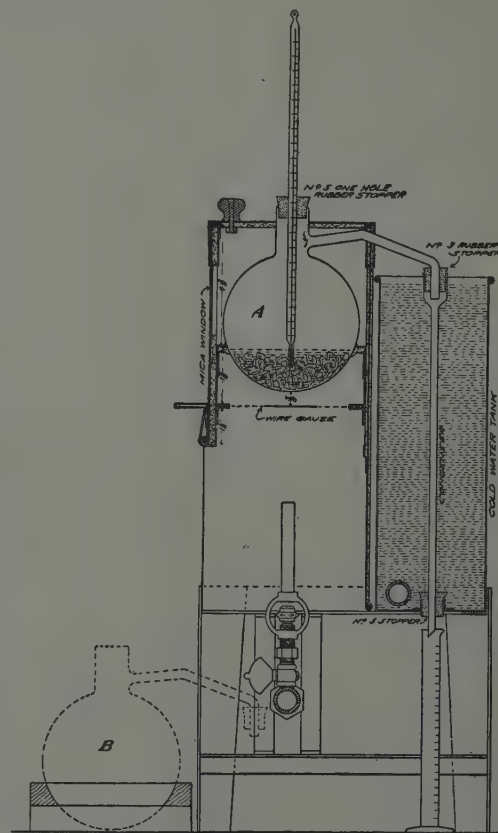


Fig. 2.—Sectional view, showing the various parts properly connected for use. A, Distillation flask in position, three eighths of an inch above the wire gauze; B, Distillation flask in wooden rack, used only during filling.

pressed into the holes in the bottom of the cold-water tank the tops of the tubes will be approxi-

\*This circular has been prepared in order to provide specific instructions for making moisture determinations of different substances and to bring about more uniformity in the use of the apparatus. The use of this moisture tester with corn has resulted in more attention being paid to the proportion of dry matter contained therein, and already considerable quantities of corn are being sold on a percentage statement of moisture or on grades in which the percentage of moisture is limited, and it is believed that the time is not far distant when this will be the universal practice. The apparatus described was developed by Mr. Edgar Brown and Dr. J. W. T. Duvel, of this Bureau, and has been patented by them in order to secure its free use by the people of the United States.—Wm. A. Taylor, Acting Chief of Bureau.

†See "American Elevator and Grain Trade," April 15, 1907.



mately one-fourth of an inch above the top of the tank.

The No. 5, one-hole, rubber stoppers which carry the thermometers and the No. 3, one-hole, rubber stoppers used on the side tubes of the flasks should be of such quality as will withstand comparatively high temperatures and resist the action of the oil. Stoppers containing a large percentage of pure gum are not desirable. They soon swell and become unfit for use. Before attempting to put any of the glass parts through the holes in the rubber stoppers they should be moistened with oil or water, thereby lessening the chances of breaking the tubes and cutting the hands.

GENERAL DESCRIPTION OF THE METHOD.

The method consists in heating whole grains, seeds, spices, or other similar substances in a mineral oil having a flashing point much above the boiling point of water, in condensing the water

content. Moreover, ground material has a tendency to "cake" in the flask; consequently, this method is not entirely satisfactory for making moisture determinations of flour, meal, powders, or other similar substances, without some further modification.

HOW TO MAKE A TEST.

After properly mixing the bulk sample, carefully weigh the desired quantity for the moisture test and empty immediately into the distillation flask, to which add the oil and shake, with a slight whirling motion, until the two become well mixed. Grasp the neck of the flask in one hand and hold it in such a manner that when the No. 5 rubber stopper carrying the thermometer is inserted it can be readily determined whether the mercury bulb of the thermometer is properly adjusted in the oil, as shown in figure 9. Place the flask in the proper compartment of the tester and proceed in a similar manner with the remaining samples.

The correct adjustment of the thermometer is a factor which must not be ignored. If the mercury bulb of the thermometer is too near the bottom of the flask the percentage of moisture will be too low. For the same reason it is important that there be some uniformity in the length of the mercury bulbs of the thermometers, which should be approximately three-fourths of an inch.

As the thermometer is being inserted, glance along the side tube of the flask to make certain that it has not become stopped by the lodgment of some particle while emptying or filling the flask. If the side tube is not open to permit the free escape of the rapidly forming steam the pressure during the heating will become sufficient to blow out the stopper and thermometer, or possibly to burst the flask.

When the flasks have been filled and placed in the compartments of the tester, connect the side tubes of the flasks by means of the No. 3 rubber stoppers with the thimbles of the glass condenser tubes which extend down through the cold-water tank, so that the moisture which is liberated from the grain or other substance will be condensed and collected in the graduated cylinders beneath the tank. Figure 2 shows the correct manner of adjusting the various parts of the apparatus.

Place the cover over the flask, then ignite the gas, adjusting the flame so that it will require about twenty minutes to reach the temperature prescribed for the substance being tested. When the desired temperature is reached extinguish the flame quickly, after which the thermometer will show a slight gradual increase in temperature. If the sample contains a large percentage of moisture there is danger of boiling over, but this can usually be prevented by lowering the flame whenever the action in the flask becomes too vigorous, as can be readily determined through the mica window in the front of the compartment. As soon as the water stops dropping from the condenser tube, which usually requires from four to six minutes after the flame has been extinguished, the test is complete. However, before reading the amount of moisture remove the covers and then disconnect the flasks from the condenser tubes in order to allow the small quan-

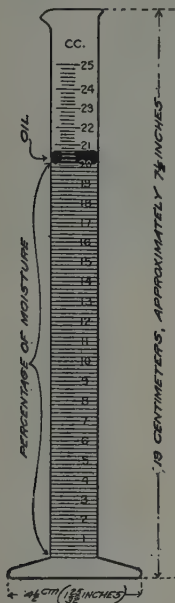


Fig. 3.—Graduated measuring cylinder, showing 20 per cent of moisture.



Fig. 8.—Condenser tube.



Fig. 12.—Improved oil measure. Each number on the glass gauge represents 150 cubic centimeters of oil.

which distills off, and in collecting and measuring it in a suitable graduate. The method, as already stated, is so simple that the tests can be made by any careful worker who is able to follow simple instructions.

A single moisture determination can be made in twenty-five or thirty minutes, and with a 6-compartment tester, as shown in figure 1, six tests can be made in approximately the same time. In com-

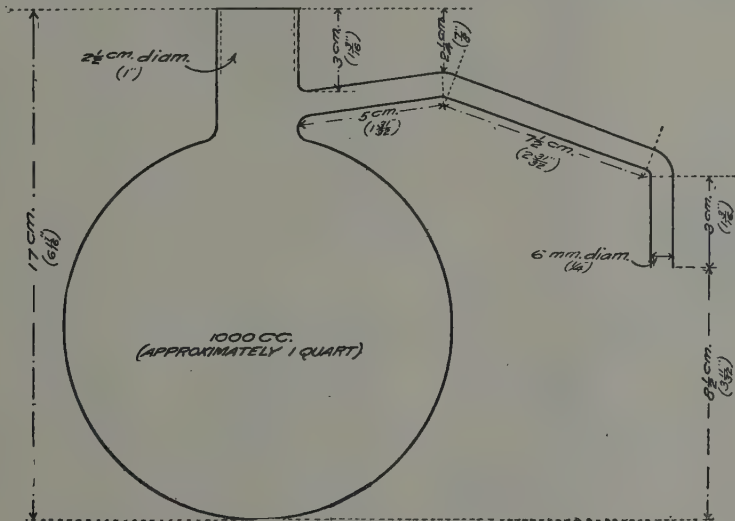


Fig. 5.—Distillation Flask.

mercial work, where a large number of tests are to be made, one man and a helper, with the use of three 6-compartment machines, can readily make 200 or more tests in a day of eight hours, an average of less than two and one-half minutes for each test. In addition to the rapidity with which moisture determinations can be made by this method, it is especially valuable in testing substances which have a large percentage of water, are difficult to grind, or contain such large quantities of volatile oils that determinations based upon differences in weight during drying are unreliable. This method also obviates the grinding of samples, thus eliminating the loss of water which accompanies the grinding of material of relatively high moisture

tity of moisture which sometimes collects at the base of the No. 3 rubber stoppers to drop into the graduated measuring cylinders. The percentage of moisture is read beneath the layer of oil on top of the water, as shown in figure 3. In order to guard against possible error it is desirable to make duplicate tests of all samples and take the average of the two readings as the correct percentage of moisture.

While the contents of the flasks are still hot, take the flask by the side tube and after giving a slight whirling motion invert quickly, emptying the contents into a suitable strainer, so that the oil can be recovered for further use.

When the flasks are not in use, keep them in

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of drying grain will enable you to furnish well dried corn so natural in appearance that an expert would find difficulty in distinguishing one from the other. Corn dried by older methods is dull looking and mealy while that dried with an Ellis Drier is bright, clean, and the natural lustre retained, making it more desirable and usable for any purpose.

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Chicago U. S. A.



place in the compartments and make all connections the same as for a test. In using a new flask for the first time "run" a preliminary sample previous to making a regular test, so that all the flasks will be in uniform condition.

#### HOW TO TEST DIFFERENT SUBSTANCES.\*

Detailed instructions have been worked out for making moisture determinations of a limited number of substances, as follows:

**Barley.**—Use 100 grams of grain and 150 cubic centimeters of oil, and extinguish the flame when the thermometer registers 190° C.

**Corn (maize).**—Use 100 grams of grain and 150 cubic centimeters of oil, and extinguish the flame when the thermometer registers 190° C. This method, however, can not be used with the pop corns.

**Corn cobs.**—Use 50 grams of cob cut in pieces that can be easily removed from the flask and 250 cubic

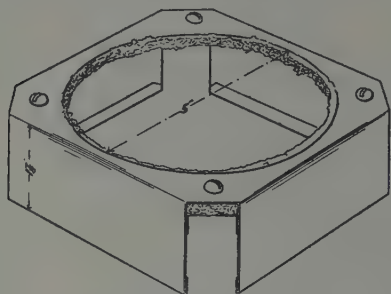


FIG. 6.—Flask support.

centimeters of oil, and extinguish the flame when the thermometer registers 190° C.

**Cottonseed.**—Use 50 grams of seed and 150 cubic centimeters of oil, and extinguish the flame when the thermometer registers 190° C.

**Flaxseed.**—Use 100 grams of seed and 150 cubic centimeters of oil, and extinguish the flame when the thermometer registers 175° C.

**Kafir.**—Use 100 grams of grain and 150 cubic centimeters of oil, and extinguish the flame when the thermometer registers 190° C.

**Oats.**—Use 50 grams of grain and 150 cubic centimeters of oil, and extinguish the flame when the thermometer registers 195° C. In oats that are light and chaffy special care should be taken to insure the thorough mixing of the oil and grain and to heat with a slower flame in order to reduce the foaming to a minimum. In extreme cases it may be necessary to all an extra 50 cubic centimeters of oil.

**Rice (unhulled).**—Use 100 grams of grain and 150 cubic centimeters of oil, and extinguish the flame when the thermometer registers 190° C.

**Rye.**—Use 100 grams of grain and 150 cubic centimeters of oil, and extinguish the flame when the thermometer registers 175° C.

**Soy bean.**—Use 100 grams of beans and 150 cubic centimeters of oil, and extinguish the flame when the thermometer registers 170° C.

**Wheat.**—Use 100 grams of grain and 150 cubic centimeters of oil, and extinguish the flame when the thermometer registers 180° C.

#### OIL FOR THE MOISTURE TESTS.

In making tests a good grade of mineral engine oil should be used. The oil must be free from water, should have a flashing point in open cup of approximately 200° to 205° C. (392° to 401° F.), and preferably a viscosity between 10 and 15 (Engler) at 20° C. (68° F.). The higher the viscosity the greater the danger of boiling over, and for this reason cylinder oils should not be used; as a rule, they are too heavy for good results.

After the tests are completed and while the oil is still hot, empty the contents of the flasks into a strainer to recover the oil, which can be used repeatedly. A funnel strainer fitted to the mouth of a 3 or 4 gallon milk can, is serviceable and inexpensive.

#### MEASURING THE OIL.

A conical glass graduate, as shown in figure 11, having a capacity of 150 cubic centimeters, is ordinarily used for measuring the oil for the test. A more complete device consists of a graduated glass gauge and a stopcock fitted to a cylindrical brass cup of a size to hold sufficient oil for at least a dozen tests, as shown in figure 12.

#### DRAWING AND HANDLING SAMPLES.

It is admitted that to secure a representative sample is often very difficult, but the necessity of

\*Different substances are likely to require slightly different treatment, which can be determined only by careful experiments covering a wide range of conditions, checking the results with the tests made by drying a definite quantity to constant weight and calculating the loss in weight as the percentage of moisture. The data here shown were secured by checking the results with moisture determinations made by drying to constant weight in the common type of double-walled oven filled with water maintained at the boiling point, except that the proper treatment for flaxseed was determined by checking with samples dried to constant weight in a 28-inch vacuum at a temperature of 95° to 100° C. Moisture determinations made in vacuum at temperatures of 105° or 108° C. will show higher percentages than will result from the method herein described.

sparing no trouble in this respect is most strongly urged.

In securing samples of grain from cars, etc., it must be remembered that, as a rule, grain from the surface will show less moisture than that in the body of the shipment. In corn in cars it is not uncommon to find differences of several per cent between the moisture content of the layer of corn immediately at the surface and that of the body of the grain directly beneath. In an experimental shipment of three lots of corn contained in a single car in which special care was taken to see that each lot was uniform throughout, moisture tests at destination, fifteen days after shipment, showed 14.1 per cent, 14.3 per cent, and 14.1 per cent for corn from the surface of each of the three lots, as compared with 17.3 per cent, 16.9 per cent, and 19.2 per cent, respectively, for the samples taken with a grain trier from 2 to 3½ feet below the surface, the latter percentages being practically the same as at the time of shipment.

Likewise, the same care must be observed in handling the samples after they are drawn from the bulk or weighed for the test. If exposed to the air they will lose moisture in accordance with the condition of the atmosphere and the percentage of water in the sample. A preliminary test with 100 grams of wheat containing 14.5 per cent of moisture showed a loss of 0.20, 0.35, 1.10, and 1.90 per cent when exposed to the air of the laboratory for periods of one-half, one, four, and twenty-six hours, respectively. A second lot of wheat containing 16.1 per cent of moisture lost 0.50, 0.75, 1.75, and 3.20 per cent, respectively, during the same periods under identical treatment.

#### BALANCE FOR WEIGHING SAMPLES.

While not a part of the apparatus, a balance is necessary for weighing the samples. One of simple construction, having a sensitiveness of one-twentieth or even one-tenth of a gram has been found quite satisfactory. Balances which have a special scoop for emptying the weighed samples into the distillation flasks, will meet all requirements. Such

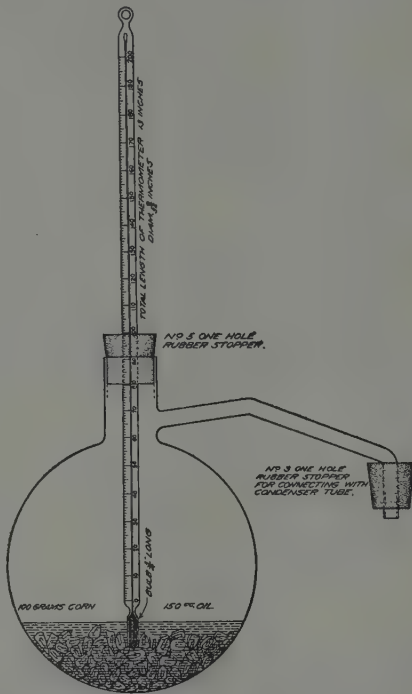


FIG. 9.—Distillation flask, showing the correct adjustment of the thermometer.

balances are likewise much less expensive, less likely to get out of order, and more easily operated than the delicate analytical balances commonly used in chemical laboratories.

Whatever the type of balance used, it should rest on a firm support, preferably a heavy shelf securely fastened to a solid wall of the building, which will greatly facilitate the keeping of the scale in balance, which is absolutely essential for reliable work.

#### SPECIAL POINTS FOR CONSIDERATION.

(1) The moisture tester should be installed in a place where it will not be exposed to strong air currents.

(2) The tester can be equipped for burning alcohol or gasoline, but gas is to be preferred whenever available.

(3) The wire gauze with asbestos center should be kept in good condition so that the flame will not play directly upon the bottom of the flask.

(4) The bottom of the flask should be not less than three-eighths of an inch above the wire gauze.

(5) See that the column of mercury in the thermometer is continuous; if broken it should be shaken down.

(6) Adjust the thermometers in the rubber stop-

pers so that the bulbs of the thermometers will be approximately four-fifths immersed in the oil.

(7) Keep a good supply of cold water running through the condenser tank.

(8) Adjust the flame so that about twenty minutes are required to reach the prescribed temperature.

(9) If the moisture content of the sample is high, so that there is a tendency to boil over, lower the flame until a considerable portion of the water is distilled over.

(10) When the thermometer registers the prescribed temperature, extinguish the flame promptly.

(11) After the flame is extinguished a slight gradual increase in temperature is to be expected.

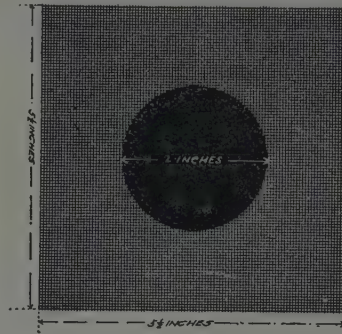


FIG. 7.—Wire gauze with asbestos center.

A sudden increase or a sudden decrease in temperature of several degrees indicates that the flame was too intense during the latter part of the heating and the test should be repeated.

(12) See that there is no water in the graduated cylinder before starting the test.

(13) Read the percentage of moisture in the graduated cylinder beneath the layer of oil on top of the water.

(14) If the water which distills over is discolored, the substance has evidently been burned and the test should be repeated.

(15) When not in use keep the flasks in position in the compartments, with all connections made as for making a test.

(16) Before making a test in a new flask, "run" a preliminary sample, so that all the flasks will be in uniform condition.

(17) Draw all samples carefully and keep them in air-tight containers until ready to make the test. They lose moisture rapidly when exposed to the air.

(18) Place the scales on a firm support and see that they are in balance before making a weighing.

(19) The specific instructions for making tests given in this circular do not apply to modified forms of testers.

#### ORIGIN OF PELLAGRA.

Dr. Sambon, whose name has recently been much in use in relation to investigations about pellagra, spoke as early as 1905 before the British Medical Association to the effect that he believed some other agency than Indian corn must be responsible for its spread. At the time, he suggested that by analogy it appeared to be a protozoan disease. Last winter he suggested that it might be a sand fly that was the carrier of the organism and selected the genus Simulium as being the only one whose range coincided with the distribution of the disease. Like the disease, the fly has a double season each year. In March of the present year means were furnished Dr. Sambon for a trip of observation to Italy and he declares the distribution of maize to be quite different from that of the disease. He also found many pellagrins who have never used the corn. The English investigator traced out a relationship between the disease and streams in which he found the larvæ of the fly, and proved the endemic centres to have been the same for a century. The sand flies bite morning and evening, which has been found to be the case with others of the fly carriers of protozoa. Pellagra is not hereditary and not contagious.

The Durban, South Africa, September report of corn exports shows an increase in August from that port, 246,469 bags having been shipped. Yellow and white rounds are more scarce this season. Maize exported from Durban during September was shipped as follows:—United Kingdom 31,582 bags, Belgium 28,145, Germany 39,975, Madeira 1,997, Cape Colony 2,536, total 104,235, against 81,073 in 1909, 40,434 in 1908, 29,816 in 1907, all qrs. of 480 lbs. Export figures for all South African ports for the season, May, 1909, to 30th April, 1910, are:—Durban 595,519 qrs., Cape Town 95,691, Port Elizabeth 52,273, East London 96,007. Total 939,490. Produced by Orange Free State and Basutoland 606,252, Transvaal 195,498, Natal 135,733, Cape Colony 2,007, total 939,490 qrs.



## OBITUARY

Henry F. Schoonmaker, manager of the Farmers' Elevator at Omamee, N. D., died at his home recently.

Albert Elwell, for over twenty years in the stock and grain business, died recently at the Englewood Hospital, Chicago. He was 45 years old and leaves a widow and son.

George J. Gaiser of Grand Rapids, Mich., who was engaged in the hay, grain and feed business, was recently mistaken for a deer and shot while hunting. Deceased was 46 years old.

Robert E. Quinland died in Kansas City, Mo., on November 17. Mr. Quinland was engaged in the seed and feed business. He was 38 years old and is survived by a widow, three sisters and a brother.

Hugh N. Baird, of the grain firm of Crane & Baird, Toronto, Ont., died recently. He had been in business in Toronto for forty years and was president of the Board of Trade in 1891 and 1892.

Charles Orrin Breed, a retired member of the grain trade, died suddenly from heart failure at Lynn, Mass., on November 15. Deceased was 59 years old and a member of the Boston Chamber of Commerce.

Frederick Leonard, one of the oldest settling clerks employed in the Chicago Board of Trade, dropped dead on November 19, in the office of Frank E. Winnan. He had settled trades for nearly thirty years.

Edwin P. Griesbach, a member of the Board of Trade and head of a malting concern in Chicago, died of pneumonia recently at the age of 52, after an illness of ten days. The funeral was held at his home in La Grange, Ill.

H. J. Traverse, manager of the grain and coal department of the Atlas Elevator Co., at Wessington, S. D., recently lost his life when a gas tank on the Pullman car, on which he was riding, exploded, setting fire to the car.

Clark E. Twamley, president of the National Seed Tester Co., died a short time ago at Mercy Hospital, Chicago. Mr. Twamley was born in Monticello, Iowa, in 1866. Deceased was well known as an inventor and as an enthusiast for better crops. He is survived by a wife and seven children.

Frank P. Schmitt, Sr., a retired member of the Board of Trade, recently committed suicide in the lagoon at Lincoln Park, Chicago, as the result of sorrow over the death of his son, State Senator F. P. Schmitt, Jr. Mr. Schmitt was seventy-seven years old and lived with his daughter-in-law. The funeral services were conducted by M. M. Mangasarian.

William O. Blaney died at his home in Boston, Mass., November 12, from a complication of diseases. Mr. Blaney was born in Bristol, Me., in 1841, but went to Boston early in life where he became associated with the firm of Davis & Crosby, flour and grain merchants. After the dissolution of that firm he formed a partnership with Mr. Crosby. Later he did business under the firm name of Blaney, Brown & Co. At the time of his death he was president of the Commercial National Bank. Mr. Blaney was a Mason, a member of the Boston Corn Exchange, vice-president of the John Hancock Mutual Life Insurance, vice-president of the Associated Board of Trade and a trustee of the Medfield Insane Asylum. Deceased is survived by a widow, a son and a daughter.

## For Sale

[Copy for notices under this head should reach us by the 12th of the month to insure insertion in the issue for that month.]

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#### FOR SALE.

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Elevator in fine farming district in northern Kansas for sale. Only grain business in town. Good crops this season. Address

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For sale or lease, my elevator in Union, Nebr. Capacity 10,000 bushels; fully equipped. Good location. Call or address

W. B. BANNING, Union, Nebr.

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Gasoline engines for sale; 5, 7, 10, 20, 30 and 45 horsepower.

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### GASOLINE ENGINE FOR SALE.

One 34 H. P. Miami Gas or Gasoline Engine for sale. In good running order.

STRAUB MACHINERY CO., Cincinnati, Ohio.

### GASOLINE ENGINE FOR SALE.

A 50 h. p. Model Gas or Gasoline Engine for sale. Cost new \$1,650; will sell for \$250 for quick sale. Address

F. F. BRENNAN, Carthage, Ind.

### LARGE LINE OF MACHINERY CHEAP.

Large line of various machinery for mill and elevator equipment; special low prices for quick sales. Write for particulars to

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### IRON GRAIN TANKS FOR SALE.

Four round galvanized iron tanks in good condition, suitable for grain. Hoppered at the bottom; 6 feet in diameter; 8 feet high.

YPSILANTI MACHINE WORKS, Ypsilanti, Mich.

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One No. 8 Monitor Scouring Machine, one Wolf Patented Inter-elevator Flour Dresser and one Unique Flax Grinder for sale. All in good shape, the last two nearly new. Address

UNITED GRAIN CO., Minneapolis, Minn.

## SCALES

### SCALES FOR SALE.

Scales for elevators, mills, or for hay, grain or stock; new or second-hand at lowest prices. Lists free.

CHICAGO SCALE CO., 299 Jackson Boulevard, Chicago, Ill.

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Pure Medium, Mammoth and Alsike Seed for sale. Write for samples and prices. Address

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Kentucky grown orchard grass and Kentucky fancy blue grass, fancy and unhulled red top, car lots or less. Address

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E. W. WAGNER & CO., 98-99-100 Board of Trade, Chicago

### WE WANT CLOVER,

Timothy, etc. Send samples, stating quantity to THE ADAMS SEED COMPANY, Box 10, Decorah, Iowa.

### FLOUR AND MILL FEEDS.

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J. C. HAINES & CO., Augusta, Kan.

## Miscellaneous Notices

[Copy for notices under this head should reach us by the 12th of the month to insure insertion in the issue for that month.]

## ELEVATORS WANTED

### ELEVATOR MAN WANTED.

A bright, experienced elevator man wanted; one who understands machinery and is a good judge of grain. State wages expected. Address

T. H. REED & SON, Rushville, Ind.

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Elevator or mill and elevator for good improved Illinois or Iowa farm. Address IOWA, Box 1, care "American Elevator and Grain Trade," Chicago, Ill.

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Wanted, to rent with option to buy, a 10,000 to 15,000-bushel elevator shipping 125 to 150 cars annually, oats and yellow corn. Located in Ohio or Indiana on the Pennsylvania Railroad. Address

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John A. Rodgers

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References { First National Bank, Peoria, Ill.  
Commercial German National Bank, Peoria, Ill.

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305 and 306 Chamber of Commerce, ST. LOUIS

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BECAUSE WE ARE BOTH PRAC-  
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We buy F. O. B. your station for  
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6 Board of Trade CHICAGO

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29 Chamber of Commerce

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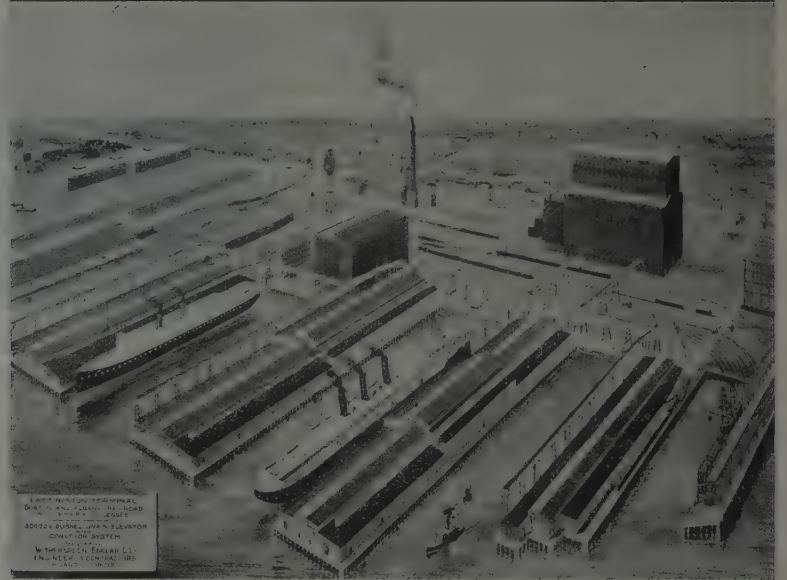


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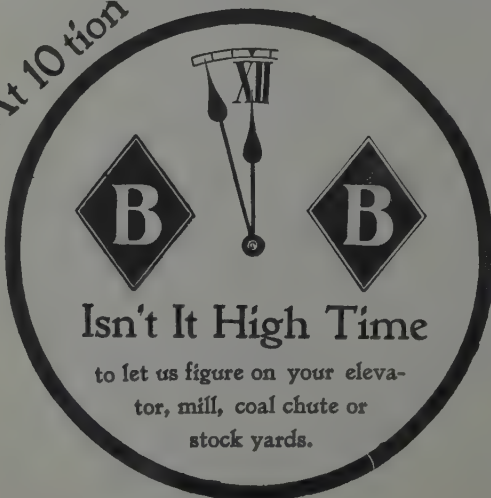
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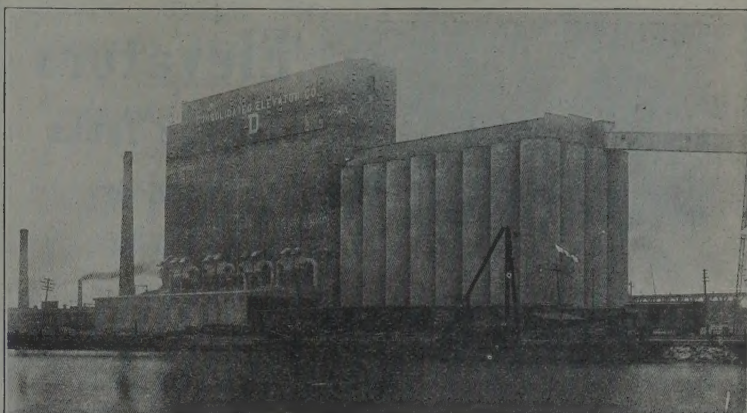


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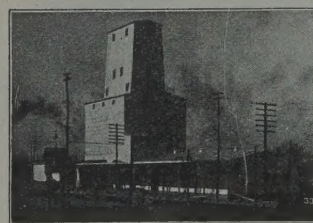
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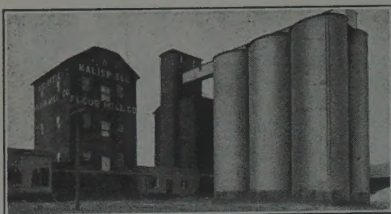
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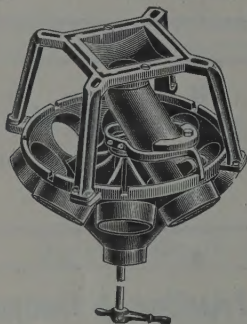
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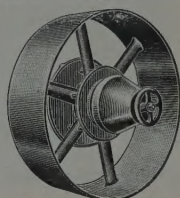
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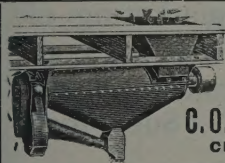
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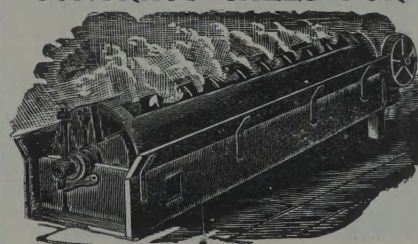


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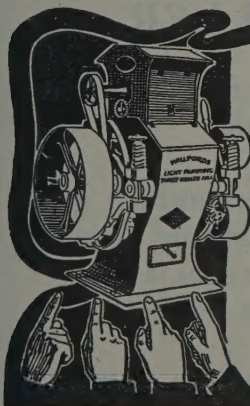
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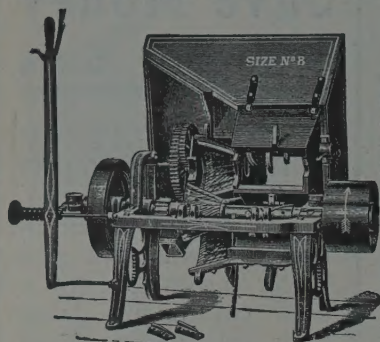
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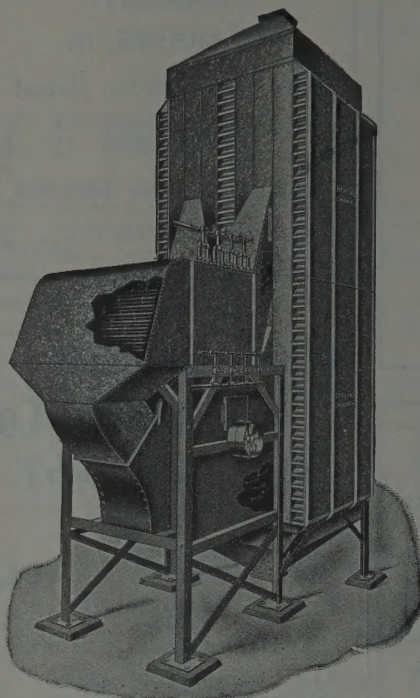
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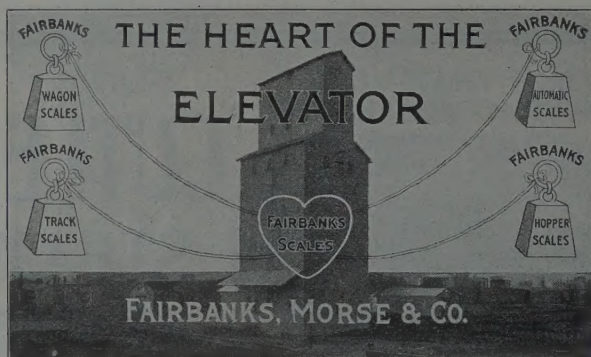
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